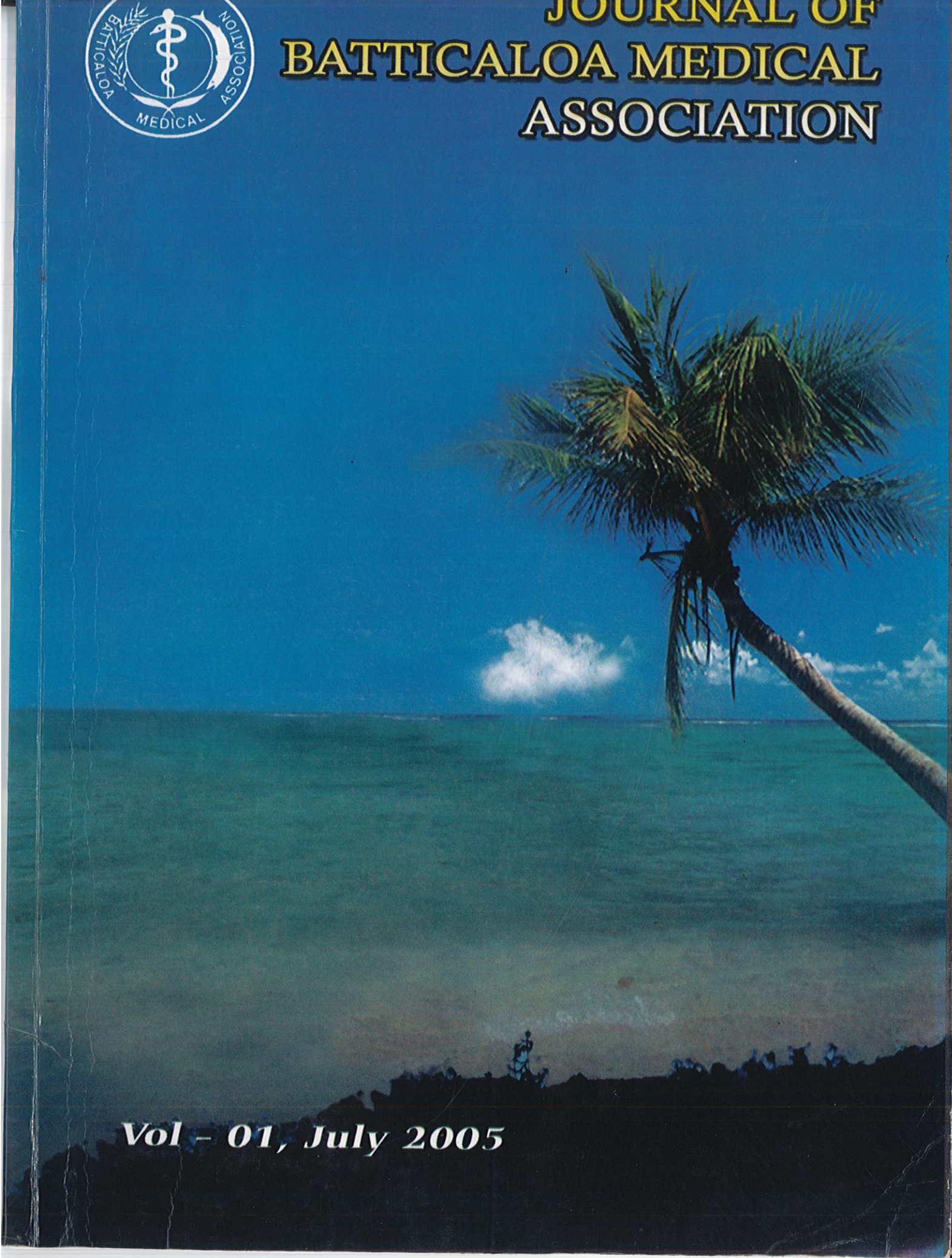
JOURNAL OF BATTICALOA MEDICAL ASSOCIATION



Vol – 01, July 2005

JOURNAL OF BATTICALOA MEDCAL ASSOCIATION

Vol: 01, July 2005

CONTENTS

President's Message

My office bearers and myself are delighted to note that publishing this pioneer issue of the Journal of Batticaloa Medical Association (JBMA) should be a significant milestone in the 33 years old long history of Batticaloa Medical Association (BMA). Man made disasters such as the two decades of ethnic strife and natural disasters such as cyclone 77 and Boxing Day Tsunami are the main contributory factors for such a long delay in launching a publication.

When I assumed office 18 months ago I had indicted that my vision is to conduct the Inaugural Scientific Session and also to publish a journal for the first time in BMA. I am proud that I could accomplish both these by July 2005 with the generosity of the sponsors. I should personally thank Citadel Fine Pharmaceuticals of the Harcourts (Private) Limited for their sponsorship of this journal. Mr. P. Ravindrakumar of Citadel had been encouraging me to print this journal for quiet some time. It was delayed again due to skeptical attitude from other. Fortunately due to the enthusiasm shown by the new editor and the 'Scientific Session Fever pitch' had resulted in many articles were presented for publication in a very short period of time but we have to reluctantly turn down few of them. My sincere thanks to the energetic editor and to the authors of the articles. I would like to appreciate the services of Mr. Alagakone Paskaran in compiling this journal.

This publication will not only improve the writing skills of our medical professionals but also provides a window of opportunity to share our experience with the rest of the world.

The readers should forgive us for any mistakes and unintentional omissions in this journal since this is our pilot project. I hope the future office bearers of BMA will continue to publish JBMA annually.

T. Rudra

Editors' message

Though Batticaloa Medical Association was established in 1972, it has been in a dormant state in academic activities during the last decade due to various obvious reasons. Armed ethnic conflict and its consequences have affected the east more than other parts of the country. Recurrent displacement of public including health care professionals, instability in health care delivery system including the infrastructure and lack of health care professionals to math over clinical work load are some of those reasons to be mentioned.

It gives me a great pleasure at this moment the Journal of Batticaloa Medical Association is printed after a long latent period. Publishing this Journal will definitely boot up on continuing medical education and updating the medical knowledge. Continuing medical education (CME) is recognized as the key to high quality health care delivery, since only by upgrading knowledge and maintaining competence will professional obsolescence be avoided.

Today health professionals have come under considerable pressure as a result of change in their work load, coupled with lack of resources and rising public expectations. Though it is a boot up Journal, we have every confidence that this publication will be continued on regular basis in future as an event of CME programme.

Criticism and your genuine suggestions would be very encouraging for us to improve the quality of this Journal in future.

The unique feature of this Journal is, that more participation from the junior doctors, even from the peripheral hospitals. We deeply appreciate the contributors for their valuable articles, though without much access to the current medical literature at our working environment.

S.Naveenakumar

The Future of Hypertension Management

V.Vivekanantharajah*

Hypertension is a leading cause of the global disease burden, behind only malnutrition and unsafe sex. It is relatively more important in developed regions but also a major and growing cause of disease in the developing world. Although our understanding of the patho- physiology of hypertension has increased, in 90 to 95% of cases the aetiology and thus potentially the means of prevention or cure is still largely unknown. As a consequence hypertension is treated non-specifically resulting in a large number of minimum side effects and relatively high non-compliance rate- 50 to 60%.

The association between hypertension and coronary heart disease (CHD) and stroke is direct, independent and continuous from blood pressure levels of 115mmHg systolic and 75mmHg diastolic upward. For every 5mmHg increase in diastolic blood pressure, there is a 25% increase in CHD risks and a 34% increase in stroke risks and with a 25% increase in both CHD and stroke risks, for every 10 mmHg increase in systolic blood pressure.

The benefit of treatment of hypertension first became evident in the 50's when medical treatment of malignant hypertension, an almost uniformly fatal disease without treatment at that time resulted in a reduction in mortality.

For the past few decades after this, a series of large scale randomised controlled trials were carried out to determine if medical treatment of the, by far larger problem of essential hypertension with either beta - blockers or diuretics would provide similar benefits as that seen in the treatment of malignant hypertension. These studies clearly showed that a reduction of systolic blood pressure by 10 to 12 mmHg and diastolic pressure by 5to 6 mmHg reduced CHD rate by 16% and stroke by 38%, consistent with the reduction expected from epidemiological data.

In the past ten years or so, emphasis has changed, with a series of studies carried out

1. to determine the efficacy of newer antihypertensive agents such as ACE inhibitors, calcium channel blockers, alpha blockers and ARB's

2. of the various antihypertensive strategies based on different drug classes

3. of targeting different blood pressure goals in different patient cohorts.

These studies revealed that treatment with any of the commonly used agents (with the exception of α blockers) or regime reduced the risks of total cardiovascular events and that a larger reduction in blood pressure produced a greater reduction in risks. There were evidence however that there were differences between agents in their effect on specific cardiovascular outcomes independent of blood pressure reduction and the intriguing importance of bringing down blood pressure early and quickly.

The results of these studies were reflected in the recommendations of the latest guidelines on BP management, with emphasis on lowering of BP to optimal levels being more important than any specific drug selection (except there is compelling evidence for the use of a particular drug class). In addition, the optimal target levels were reset for certain patient cohort, such as in patients with diabetes. More controversial was the labelling of patients with BP of 120 to 139/80 to 89mmHg as 'pre-hypertensive' in the JNC VII guidelines.

* *Senior Consultant Physician, Teaching Hospital Batticaloa.*

Guidelines for Selecting Initial Drug Treatment of Hypertension

Class of Drug	*Indications*		*Contra Indications*	
	Compelling	*Possible*	*Compelling*	*Possible*
Diuretics	*Heart failure*	*Diabetes*	*Gout*	*Dyslipidaemia*
	Elderly patients			*Sexually active male*
	Systolic hypertension			
β-blockers	*Angina*	*Heart failure*	*Asthma*	*Dyslipidaemia*
	After myocardial infarction	*Pregnancy*	*COPD*	*Atheletes*
	Tachyarrythmias	*Diabetes*	*Heart block*	*Physically active patients*
				PVD
ACE inhibitors	*Heart failure*		*Pregnancy*	
	Left ventricular dysfunction		*Hyperkalaemia*	
	After myocardial infarction		*Bilateral renal artery stenosis*	
	Diabetic nephropathy			
Ca antagonists	*Angina*	*PVD*	*Heart block*	*CCF*
	Elderly patients			
	Systolic hypertension			
ARB	*ACE inhibitor cough*	*Heart failure*	*Pregnancy*	
			Hyperkalaemia	
			Bilateral renal artery stenosis	

Going forward into the next few years, some light will be shed on whether identifying a group of individuals as pre-hypertensive only engender anxiety or whether they could be target for active drug therapy. The Trial of Preventing Hypertension (TROPHY) when completed will provide important evidence on whether drug treatment with CANDERSATAN will prevent or delay the development of hypertension, when given to individuals with 'pre-hypertension'.

Renin-Angiotensin-Aldosterone axis play a major role in the homeostasis of arterial pressure and therefore it is not surprising that the interests in developing newer anti- hypertensive agents are revolving around this.

It is also interesting to realise that the newer agents are more peripheral acting than the older class of centrally acting ones, and therefore the action is more specific with minimal side effects. A decrease in the production of Renin, Angiostensin and Aldosterone or blocking of their respective receptors will result in the reduction of blood pressure. Newer anti-hypertensive agents are developed with these properties and these new and novel anti-hypertensive agents will be evaluated and approved for hypertensive

treatment, the latest of which is EPLERENONE, a selective aldosterone blocker used either alone or in combination with enalapril. EPLERENONE is a new selective mineralocorticosteroid receptor antagonist without clinically significant androgen receptor blocking or progesterone receptor stimulating activities, which translates into absence of gynaecomastia and impotence in men and of irregular periods in women.

Other, such as OMAPATRILAT, the first of a new class of agents known as VASOPEPTIDASE INHIBITORS, though currently not approved for clinical use, may point the way for the other agents to be developed. Inhibition of the target, neutral peptidase (NEP), an enzyme involved in the breakdown of various naturetic peptides such as ANP and BNP results in greater reduction in BP.Increasing insight has also been gained in the role of ACE with discovery of a homologue of human ACE called– ACEH or ACEH /ACE2- which appear to have a counterbalancing function to that of ACE. This too may provide future target for the development of new hypertensive agents.

Another novel approach reported was that of developing a vaccine against the rennin- angiotensin system which may some day be offered to young hypertensives or'pre-hypertensives' to prevent the development of hypertension.

However, many have argued that the effectiveness of the approach with traditional pharmacotherapy has reached a pleatu and interests now focus on the possibility of treating or even curing hypertension by genetic means. Two classes of genes in particular are generating interests- the set of vasodilatory and vasoconstrictive genes- as these offer relatively well known targets of genetic modification, either through a 'sense' or' anti-sense' approach to tilt the balance towards vasodilatation.

Although these approaches hold great potential for treatment of hypertension, their clinical promises are still some off in the future.

In conclusion the management and treatment of hypertension have come a long way since the 50's but exciting discovery and novel approaches are now being made and tried, which will herald in new and revolutionary ways of managing hypertension in the future.

Acknowledgements

I am grateful to my wife Dr (Mrs.)G.Vivekanandarajah for her comments and inspiration and Dr. S. Thirumal for his assistance in word processing.

This article is based on the papers presented at the 15th ASEAN congress of cardiology October 23rd to 26th – 2004.

Further Reading:

1 JA Staessen et al, SYST-EUR (**SYST**olic hypertension in **EUR**ope), Lancet350: 757, 1997

2 J Tuomilehto et al, SYST-EUR (**SYST**olic hypertension in **EUR**ope), N Engl J Med 341:372,1999

4 Hansson et al, HOT Study (**H**ypertension **O**ptimal **T**reatment) Lancet 351: 1755, 1998

5 LJ Appel et al, DASH Trial (**D**ietary **A**pproaches to **S**top **H**ypertension) N Engl J Med 336:1117, 1997

6 S Yusuf et al, HOPE (**H**eart **O**ut **C**ome **P**revention **E**valuation) 2000

7 B Dahlof et al, LIFE (**L**osarten **I**ntervention **F**or **E**ndpoint reduction in hypertension) Lancet 359: 995, 2002

8 ALLHAT Collaborative Research Group 2002 ALLHAT (**A**nti hypertensive and **L**ipid **L**owering treatment to prevent **H**eart **A**ttack **T**rial)

Acute Rheumatic fever: a continuing health burden

S.Naveenakumar*

Acute rheumatic fever (ARF) is a delayed, nonsuppurative sequela of a pharyngeal infection with the group A streptococcus. It is an illness of children and young adults, with major symptoms of arthritis and carditis, a prolonged course, and a tendency to recur.

Epidemiology

The incidence of ARF declined dramatically in the developed countries from the 1940s. However, rhematic fever remains a major health problem in the developing world; estimates suggest 10 to 20 million new cases per year will occur in those countries in which two-thirds of the world's population live. Rheumatic heart disease is responsible for up to 50% of cardiac patients in the Indian subcontinent and is the most common cause of death in young patients with heart disease (1).

There is no need to highlight that the burden of rheumatic heart disease is huge in all developing countries and as the patients are young, the load on health budget is alarmingly high (2).

Pathogenesis

The pathogenic mechanisms that lead to the development of ARF remain incompletely understood. Clearly streptococcal pharyngeal infection is a pre-requisite for the subsequent development of the disease and genetic susceptibility may be present.

On the other hand, evidence is sparse that toxins produced by the streptococcus are important.

Crowding, poor housing, poor hygiene and inadequate medical care all contribute, over-crowding being the predominant factor. Increased rheumatogenicity of streptococci has frequently been demonstrated during epidemics. Possibly heightened rheumatogenicity occurs with repeated upper respiratory infections in crowded communities where there is an undue acceptance of symptoms of infection (3).

Role of the streptococcus

Despite the little evidence for the direct involvement of group A streptococci in the affected tissues of patients with ARF, significant epidemiologic and immunologic evidence indirectly implicates the group A streptococcus in the initiation of disease.

- Outbreaks of rhematic fever closely follow epidemics of either streptococcal sore throats or scarlet fever (4).

- Adequate treatment of a documented streptococcal pharyngitis markedly reduces the incidence of subsequent rheumatic fever (5).

* *Consultant Physician, Teaching Hospital Batticaloa*

- Appropriate antimicrobial prophylaxis prevents the recurrence of disease in patients who have had ARF (6, 7).

- Most patients with ARF have elevated antibody titres to at least one of (if not all) three antistreptococcal antibodies, whether or not they recall an antecedent sore throat (8).

Several hypotheses have been proposed, but the most widely accepted hypothesis is "Antigenic mimicry" and "Cross reacting antibody" which means common antigenic determinants are shared between streptococcal components and human connective tissue so that the antibody produced by the streptococcal infection cross-reacts with host tissue (9). Such type of immunological cross-reactivity was demonstrated between the streptococcal "M" protein and protoplast membrane antigen with myocardial sarcolemma (10), between protoplast membrane antigen and caudate nucleus, between streptococcal carbohydrate (N-acetylglucosamine) and valvular glycoprotein and between hyaluronate capsule and articular cartilage(11,12). However, antibody-mediated tissue injury is not the only factor.Cell mediated cytotoxicity has also been proposed and substantiated as an alternative mechanism(13).

Pathology

In ARF there is a diffuse inflammation of connective or collagen tissue particularly the small vessels producing a diffuse vasculitis. In the heart all three layers may be affeceted and usually cause pancarditis. Myocardial involvement is characterized by the Aschoff body, a granulomatous lesion with a central necrotic area, particularly in the subendocardium of the left ventricle.

Rhematic endocarditis is the most important cardiac lesion. Inflammation and oedema of the valve cusps is associated with verrucous nodules which develop along the lines of valve closure. Rheumatic pericarditis is usually transient and may produce a serofibrinous effusion.

Arthritis is characterized by serous effusion without cartilage involvement and healing occurs without residual deformity. The subcutaneous nodules resemble Aschoff body in histology and disappear following the acute illness. Erythema marginatum and chorea are due to underlying vasculitis. The basal ganglia and cerebellum shows perivascular infiltration with lymphocytes (14).

Diagnosis

The diagnosis of rheumatic fever cannot be determined readily by laboratory tests, although some provide supporting evidence of illness or are used to follow the progress of treatment. In the absence of a specific diagnostic test, ARF is frequently over diagnosed and is occasionally misdiagnosed. Therefore a set of guidelines were provided by Dr.T.Duckett Jones in 1944 called "Jones criteria".These criteria were modified (1955), revised (1965, 1984) and updated (1992) by the American Heart Association

Guidelines for diagnosis of initial attack of rheumatic fever (Jones criteria, 1992 update)

Major Manifestations	*Minor Manifestations*
➢ Carditis	**Clinical findings**
➢ Polyarthritis	➢ Arthralgia
➢ Chorea	➢ Fever
➢ Erythemamar gin-atum	
➢ Sub cutaneous nodules	**Laboratory findings**
	➢ Elevated acute phase reactants (ESR C-Reactive protein)
	➢ Prolong PR interval

Supporting evidence of antecedent Group A Streptococcal infection

- ➢ Positive throat culture or rapid streptococcal antigen test.
- ➢ Elevated or rising streptococcal antibody titre.

If supported by evidence of preceding group A streptococcal infection the presence of two major manifestations or one major and two minor manifestations indicate high probability to acute rheumatic fever.

Whereas former guide-lines included previous rheumatic fever or rheumatic heart disease as major or minor manifestations, the updated guide-lines were intended only for the diagnosis of the initial attack of acute rheumatic fever and, therefore, a history of rheumatic fever and the presence of rheumatic heart disease were not included (15). Furthermore, and contrary to the previous criteria, the updated guide-lines stated that a clinical history of sore throat or scarlet fever unsupported by the laboratory data was inadequate evidence of recent group A streptococcal infection.

The antibody usually tested is anti streptolysin O. Titres of anti streptolysin O vary with age, season and geography (16). After streptococcal pharyngitis, the antibody response peaks at about four to five weeks, which usually is during the second or third week of rheumatic fever (depending upon how early it is detected). Thus, it is useful to take one serum specimen when the diagnosis of ARF is first suspected, and another one two weeks later for comparison. Antibody titres fall off rapidly in the next several months and reach a slower decline after six months. Titres cannot be used as a measure of rheumatic activity.

Only 80% of patients with documented ARF show a rise in the titre of antistreptolysin. Thus, a negative titre should incite testing for other antistreptococcal antibodies such as anti-DNAse B, anti-DNAse, and antihyaluronidase.

Because of the late presentation, titres, are usually convalescent and are considered positive when they exceed a given level – 250 for antistreptolysin O, 320 for antiDNAse and 300 for antihyaluronidase.

Indian studies have shown that erythema marginatum is exceptionally rare whereas arthralgia is common in Indian circumstances(17,18). Roy has suggested that the triad of polyarthritis, raised ESR or C-reactive

protein and high ASO titre should be considered sufficient for the diagnosis of rheumatic fever (19).

Diagnosis of carditis during ARF

Rheumatic fever produces pancarditis. Presence of pericardial rub and murmur of valvular involvement with or without evidence of heart failure support the diagnosis of carditis. Studies have, however, shown that some patients may have sub-auscultatory valvular involvement which can be detected only by Doppler echocardiography (20). However, American Heart Association recommendation supports the view that valvular regurgitation documented by Doppler alone without any auscultatory evidence should not be considered as enough for diagnosing valvulitis (21).In some patients carditis may take an indolent course and patient may present several months after the acute attack. By this time the patient usually does not show any evidence of preceding streptococcal infection and signs of systemic inflammation have usually bated (22).

Presence of pericardial rub or heart failure disproportionate to the severity of valvular lesion are important clues for diagnosing active carditis in a case with established rheumatic heart disease.

Isolated polyarthritis

Classical rheumatic polyarthritis is fleeting in character, involves large joints, resolves without residual deformity and is usually accompanied by high levels of ASOT. However, uncommonly arthritis may remain localized to a few joints and may not show fleeting character and may not be accompanied by other major signs. In such cases more detailed investigations and follow up required to come to a correct diagnosis.

Differential diagnosis

Many illnesses may mimic the clinical presentation of ARF. These include post streptococcal reactive arthritis (PSRA), other causes of childhood arthritis, infective endocarditis and viral pericarditis.

Several investigators have speculated that some cases of arthritis occurring after a streptococcal infection may not be caused by ARF. This disorder has been called poststreptococcal reactive arthritis (PSRA) (23-27). The following observations have been used to support the concept that PSRA is a separate disorder:

- The latent period between the antecedent streptococcal infection and the onset of migratory arthritis is shorter (one to two weeks) than the two to three weeks usually seen in classic ARF.
- The response of the arthritis to aspirin and other nonsteroidal medications is poor in comparison to the dramatic response seen in classical ARF.
- Evidence of carditis usually is not seen in these patients, and the severity of the arthritis is quite marked.
- Extraarticular manifestations, such as tenosynovitis, and renal abnormalities often are seen in these patients.

However, these patients may actually have ARF, with the above observations being explained by other factors. As an example, variations in the response to aspirin in affected

children may be caused by inadequate salicylate levels. Migratory arthritis without evidence of other major Jones criteria, if supported by two minor manifestations, still must be considered acute rheumatic fever, especially in children.

Clearly defining this reactive arthritis as a rheumatic fever variant has important implications for secondary prophylactic treatment. These patients by and large do fulfill the Jones criteria (one major, to minor). Thus, they should be treated as if they have ARF, and appropriate antibiotic prophylaxis should be prescribed (28,29).

Still's disease, the major cause of childhood arthritis, runs a chronic course and other criteria for rheumatic fever are not present. Bacterial endocarditis, although associated with fever and heart murmurs, causes relentless clinical deterioration and positive blood cultures and other stigmata of the condition should be sought. Simple viral pericarditis is never associated with valvular disease, unlike rheumatic pericarditis, in which valvular involvement and heart murmurs are always present.

The murmur of a minor congenital cardiac lesion may first be noted during a viral infection. Even in expert hands the distinction of mild congenital aortic stenosis or prolapse of the mitral valve from a rheumatic lesion may be impossible.

Treatment

There is no specific treatment nor any cure for ARF. Three major goals in the treatment of ARF are

- Symptomatic relief of acute disease manifestations.
- Eradication of the Group A beta-hemolytic streptococcus.
- Prophylaxis against future infection to prevent recurrent cardiac disease.

Admission to hospital is highly desirable for diagnosis and management, and for the education of patient and family. Bed rest remains the corner stone of treatment. Patient should remain on bed-chair rest until symptoms subside and acute phase reactants have been normal for two successive weeks. In patients with carditis, the period of rest should be strictly maintained.

The other mainstay of treatment for symptom relief is anti-inflammatory agents, most commonly aspirin (30). Dramatic improvement in symptoms typically seen after the start of therapy (24-72 hours). Usually 80-100 mg/kg/day in children and 4-8g/day in adults are required The duration of anti-inflammatory therapy varies, in majority at least for two weeks. It should be maintained until all symptoms are absent and the ESR and C-reactive protein concentration are normal, otherwise rebound will occur. However in case of carditis the duration is longer and therefore the period of suppressive treatment should be longer at least 12 weeks in mild carditis (endocarditis alone) and 4-6 months in severe carditis (myocarditis or pancarditis).

Severe carditis with heart failure should be treated with conventional therapy for heart failure. Frequently, They are treated with corticosteroids, but studies of the effects of

corticosteroids in the treatment of rheumatic carditis have shown conflicting results (31-34). The usual dose is 2mg/kg/day of oral prednisolone for the first 1-2 weeks. Depending upon the clinical and laboratory response, the dose is then tapered over the next two weeks.

Antibiotic therapy with penicillin should be started and maintained for at least 10 days, regardless of the presence or absence of pharyngitis at the time of diagnosis. The dose of oral penicillin V is that recommended for the eradication of streptococcal pharyngitis (35).

- 250mg 2-3 times daily for children
- 500mg 2-3 times daily for adults

A depot penicillin, such as benzathine penicillin G, in one single intramuscular dose should be given if compliance is an issue and it is more rationalistic especially in developing regions. .

- 600,000 units for children who weigh<27kg
- 1.2 million units for children who weigh>27kg and adults.

Individuals who allergic to penicillin can be treated with erythromycin 40mg/kg/day. A 10-day course of a narrow spectrum oral cephalosporin is also acceptable.

Rheumatic chorea could be treated with sodium valproate, 15-20mg daily in two divided doses and increased over 1 week, is helpful. Improvement is expected in two weeks, though the drug should be given for 3 months. Haloperidol, 0.05mg/kg/day, is also now being used.

Prevention

Primary prophylaxis

The aim of primary prophylaxis is prevention of the initial attack of rheumatic fever by early treatment of the antecedent streptococcal pharyngitis. Clinical differentiation of streptococcal and non-streptococcal sore throat is difficult (36). Further, there is no clinical method to differentiate a sore throat caused by rheumatogenic streptococci from the one caused by non-rheumatogenic streptococci. Throat culture is not a practical alternative because of cost, lack of availability and the time delay in getting the results (36).

Recently,however, highly specific and reasonably sensitive tests for the detection of streptococci directly from the throat, which can be performed in a few minutes, have been developed,allowing children with positive test results to be treated at the initial visit. Yet, the cost of the test is an important issue.

Prevention of sporadic cases in a susceptible community is, however, extremely difficult, compounded by the fact that only a minority of patients seek medical care for a streptococcal sore throat. Education about the recognition, complications, and treatment of streptococcal pharyngitis is vital. Clearly there is a major need in susceptible population for a co-ordinated programme involving school and community health personal. Considering the cost and morbidity involved in diagnosis and management of ARF and subsequent chronic rheumatic heart disease, there is no harm if a sore

throat is treated as streptococcal, specially in an endemic area.

How to treat a streptococcal sore throat?

In many developing countries, where the incidences of phayngitis and rheumatic fever are high and the cost of the test may be formidable,a strategy of treating all children with pharyngitis by one intramuscular injection of benzathine penicillin is the best and most practical strategy. Oral antibiotics are equally effective. However,compliance failure is common because patients stop treatment as soon as they get symptomatic relief which usually occurs in 3-4 days. A 10 days course of oral antibiotics is usually necessary for eradication of streptococci.

Penicillin remains the antibiotic of choice for the treatment of group A streptococcal pharyngitis. It is the least expensive antibiotic, and till now resistance to group A streptococci has not been documented. Oral penicillin V twice daily dose is as effective as administration 3-4 times a day (37). It can prevent primary attacks of ARF even if started as long as 9 days after the onset of acute streptococcal pharyngitis.Erythromycin,Azithromycin,Cephalosporins and Amoxicillin are also effective alternatives. The new macrolide Azithromycin has a similar susceptibility pattern to that of Erythromycin and gastrointestinal side-effects are less common; furthermore, it can be administered once daily and produces a high tonsillar concntration. It is given in a course lasting 3 days. Streptococci may be resistant to sulphonamides and tetracycline (38), therefore, one should not depend on these drugs for treating streptococcal infection.

Secondary prophylaxis

Secondary prophylaxis is aimed at the prevention of streptococcal infections which precipitate recurrences of rheumatic fever. Incomplete treatment and premature ceasation of antibiotic prophylaxis are the main causes of recurrence. Recurrence is most common within two years of the original attack but can happen at any time. Recurrence rates decrease with increasing age. Antibiotic prophylaxis should be started immediately after resolution of the acute episode. Either oral or parenteral therapy can be given (35). Acceptable oral regimens include:

- Penicillin V 250mg twice per day
- Sulfadiazine 500mg per day for children<27kg and 1000mg per day for children>27kg and adults.

The classic parenteral regimen is benzathine penicillin G 1.2 million units intramuscularly every four weeks (35). However, injections every three weeks may be more effective in preventing recurrences of ARF (35,39) and is particularly recommended where the prevalence of streptococcal throat infection is very high (40).

Some studies have shown that administration of benzathine penicillin every two weeks is much more effective than administration every three weeks and avoids any chance of prophylaxis failure (41). Any recurrence of rheumatic fever in a patient with already compromised cardiac function may lead to significant morbidity and mortality.

Duration of secondary prophylaxis

The end-point of prophylaxis is unclear and it should be individualized. Recent long-term follow-up reports have strongly supported the concept that patients who escape carditis in the initial attack will continue to do so in subsequent recurrences, and this led the American Heart Association to issue new recommendations for prevention of rheumatic fever (1995).

When patients do not have carditis, prophylaxis can be stopped 5 years after last attack or until 21 years of age, whichever is longer. Patients with carditis but no residual heart disease (no valvular disease), should continue for 10 years or well into adulthood (until 25 years of age), whichever is longer. Patients with carditis and residual heart disease (persistent valvular disease) are at high risk of developing carditis during subsequent episodes of rheumatic fever.

Considering the cost of management, morbidity and mortality associated with disabling valvular heart disease, it is justified that prophylaxis be continued for longer periods or even for life in patients with established valvular heart disease. Prophylaxis should be continued throughout pregnancy and after valve surgery. The importance of secondary prophylaxis should be explained to the patients.

The tragedy is that, in the countries where rheumatic fever is the greatest problem, funds are often inadequate even to provide long term penicillin for established cases. On the world scene, rheumatic fever is inextricably bound up with socioeconomic factors. Its elimination as a major health factor awaits abolition of poverty, overcrowding, and slum conditions.

Future

A possible future alternative to long-term prophylaxis in an individual with rheumatic fever may be streptococcal vaccines designed not only to prevent recurrent infections in rheumatic susceptible individuals, but also to prevent streptococcal disease in general. The M-protein (located in the outer layer of the cell wall of group A streptococci) is the virulence factor responsible for the organism's ability to resist phagocytosis. Because of the difficulties of clinical diagnosis of group A streptococcal pharyngitis, a vaccine capable of destroying this virulence factor is needed.

Recent advances in molecular biology have helped to locate the immunodeterminant epitopes of the M-protein molecule, which may confer protective immunity on the cost. However, other epitopes of the M-protein cross-react with the myocardial sarcolemma and can potentially lead to myocardial damage in the human host. Considerable research into ultrapurification of the M-protein epitopes is required to ensure the safety of the vaccine.

References Cited

1. Agarwl BL. Rheumatic heart diseases unabetted in developing countries. Lancet 1981; 11: 910.
2. Gordis L. The virtual disappearance of rheumatic fever in US lessons. Circulation 1985; 72: 1155.
3. Neutze JM. The cardiac aspects of rheumatic fever. In: Weatherall DJ, Ledingham JGG, Warrell DA, et al. Eds. Oxford textbook

of medicine. 3rd ed. Vol.2. Oxford University Press, 1996; 2432.
4. Whitnak E, Bisno L. Rheumatic fever and other immunologically mediated cardiac diseases. In: Clinical Immunology, vol 2, Parker C (Ed), WB Saunders, Philadelphia 1980. p.894.
5. Denny FW Jr, Wannamaker LW, Brink WR, et al. Prevention of rheumatic fever: treatment of the preceding streptococcal infection. JAMA 1950; 143: 151.
6. Markowitz M. Rheumatic fever. Recent outbreaks of an old disease. Conn Med 1987; 51: 229.
7. Shulman ST, Gerber MN,Tanz RR, Markowitz M. Streptococcal pharyngitis: The case for penicillin therapy. Pediatr Infect Dis J 1994;13: 1.
8. Stollerman GH, Lewis AJ, Schultz I, Taranta A. Relationship of the immune response to group A streptococci to the cause of acute, chronic and recurrent rheumatic fever. Am J Med 1956: 20: 163.
9. Tran A. Rheumatic fever made difficult: A critical review of pathogenic theories. Pediatrician 1976;5: 74.
10. Dale J B and Beachy EH. Epitopes of streptococcal M protein shared with cardiac myosin. Journ . of Exp. Med.1985;162: 583.
11. Kaplan MH. Immunological relations of streptococcal and tissue antigen. Journ. Of Immunology 1963; 90: 595.
12. Goldstein I and Halpern B. Immune relationship between strept.A polysaccharide and struct. Glycoprotein of heart valves. Nature 1967; 213: 44.
13. Yang LC, Soprey PR, et al. Strept. Induced cell med.immune destruction of cardiac myofibers in vitro. Journ. Of Exp Med 1977; 146: 344.
14. Buchmann DN. Pathogenic changes in chorea. American Journ. Dis.child. 1941; 62: 443.
15. Committee on Rheumatic fever, Endocarditis and Kawasaki Disease of the American Heart Association Guidelines for the Diagnosis of Rheumatic fever. Jones Criteria. 1992 Update. JAMA 1992; 268: 2069-73.
16. Rantz LA, Randall E, Rantz HH. Antistreptolysin "O". A study of this antibody in health and in haemolytic streptococcus respiratory disease in man. Am J. Med 1948; 5: 3.
17. Agarwal BL. Rheumatic fever/ Rheumatic heart disease. The national scene. In: Medicine Update API, Dalal PM (Ed). Bombay 1991; 65-70.
18. Mathur KS. Rheumatic heart disease. Problems and promises. J. Indian Med. Assoc. 1960; 16: 344-345.
19. Roy SB. The diagnosis of rheumatic fever. J. Indian Med. Assoc. 1960; 35: 344.
20. Wilson NJ and Neutze SM. Editorial: Echocardiographic diagnosis of sub clinical carditis in acute rheumatic fever. Int. J. Cardiol. 1995;50: 1-6.
21. Djani AS, Ayoub E, Bierman FZ, et al. Guidelines for the diagnosis of rheumatic fever. Jones' criteria [Up-dated 1993] Circulation 1993; 87:302-307.
22. Stollerman GH. Rheumatic fever. Lancet 1997; 349:935-942.
23. Schaffer FM, Agarwal R, Helm J, et al. Post- Streptococcal reactive arthritis and silent carditis: A case report and review of the literature. Pediatrics 1994; 93:837.
24. Arnold MH, Tyndall A. Poststreptococcal reactive

arthritis. Ann Rheum Dis 1989;48: 686.
25. Aviles RJ, Ramakrishna G, Mohr DN, Michet LJ Jr.Poststreptococcal reactive arthritis in adults: a case serie. Mayo clin Proc 2000;75:144.
26. Jansen TL, Jansen M. de. Jong AJ, Jeurissen ME. Post-Streptococcal reactive arthritis: a clinical and serological description, revealing its distinction from acute rheumatic fever. J. Intern Med 1999;245:261.
27. Mackie SL, Keat A. Poststreptococcal reactive arthritis: what is it and how do we know? Rheumatology (Oxford) 2004; 43: 949.
28. Gibofsky A, Zabriskie JB. Rheumatic fever: new insights into an old disease. Bull Rheum Dis 1993; 42: 5.
29. Moon RY, Greene MG, Rehe GT, Katona IM. Poststreptococcal reactive arthritis in children: a potential predecessor of rheumatic heart disease. J Rheumatol 1995; 22:529.
30. United kingdom and United States Joint Report: The treatment of acute rheumatic fever in children. Cooperative clinical trial of ACTH,cor: ltisone and aspirin. Circulation 1955; 11: 343.
31. Albert DA, Harel L, Karrison T. The treatment of rheumatic carditis: A review and meta analysis. Medicine (Baltimore) 1995; 74: 1.
32. The natural history of rheumatic fever and rheumatic heart disease. Ten year report of a cooperative clinical trial of ACTH,cortisone and aspirin. Circulation 1965: 32: 457.
33. Haffejee IE, Moosa A. A double blind placebo controlled trial of prednisone in active rheumatic carditis. Ann Trop. Paediatr 1990; 10: 395.
34. Human DG, Hill ID, Fraser CB. Treatment choice in acute rheumatic carditis. Arch Dis Child 1984; 59: 410.
35. Dajani A, Taubert K, Ferrier P, et al. Treatment of acute streptococcal pharyngitis and prevention of rheumatic fever: a statement for health professionals. Committee on Rheumatic fever, Endocarditis, and Kawasaki Disease of the Council on Cardiovascular Disease in the young, the American Heart Association Pediatrics 1995; 96:758.
36. Bisno AL. Acute pharyngitis: Etiology and diagnosis. Pediatrics 1996; 97 (suppl.): 955-959.
37. Shulman ST. Evaluation of Penicillins, Cephalosporins and Macrolides for therapy of streptococcal pharyngitis. Pediatrics 1996; 97 (suppl.) : 955-959.
38. Gerber MA. Antibiotic resistance: Relationship to persistence of group A streptococci in the upper respiratory tract. Pediatrics. 1996; 97 (suppl.) : 971-975.
39. Stollerman GH, Russof JH. Prophylaxis against group A streptococcal infections in rheumatic fever patients. JAMA 1952 ; 150 : 1571.
40. WHO. Rh.fev.Geneva, Switzerland. Tech. Report series no. 764, 1988.
41. Kassem AS, Zaher SR, Shleib HA, El-Kholy AG, Madkour AA and Kaplan EL. Rheumatic fever prophylaxis using Benzathine Penicillin G (BPG): Two week versus four week regimens comparison of two brands of BPG. Pediatrics 1996 ; 97 (suppl.) : 992-995.

Evidence Based Management of Ectopic Pregnancy

T. Rudra*

Ectopic Pregnancy had been one of the causes of maternal death not only in the developing world but also in the industrialized nation despite technical advances. The diagnosis of an ectopic pregnancy had been a major challenge to the gynecologists specially with limited resources. Early diagnosis and minimal intervention should be the aim in all cases to reduce the morbidity and increase the fertility (9).

Treatment of ectopic gestation had been revolutionized over the last two decades with the advent of modern surgical techniques. This had resulted in many patients are been diagnosed prior to the rupture of the ectopic and most of them undergo conservative medical or surgical treatment. But under developed nations like ours the ectopic pregnancy is frequently diagnosed after it had ruptured leading to delayed treatment with increasing morbidity and mortality. Laparoscope is mainly used for diagnosis of ectopic gestation in our country, in contrast to many other developed nations which use this for therapeutic purposes.

97.5% of the reported ectopic pregnancies are found in the fallopian tubes and the management of tubal pregnancies will be considered initially.

Management of Ruptured Ectopic Gestation

If the patient had developed signs of hypovolumia the traditional approach of performing a laparotomy is a safer and the most expedient method after initial resuscitation. The role of laparoscope is controversial and contraindicated in the presence of haemoperitoneum(21). But few experienced operators have reported case studies under exceptional circumstances. Similarly there is no place for medical management.

The technique of choice should either be salpingostomy, salpingotomy or salpingectomy. Unfortunately most studies comparing the outcome with various types of surgery were performed with the laparoscopy and in patients who had unruptured ectopic(16). But in general if fertility is not desired it is better to perform either a partial or total salpingectomy. If the damage to the tube is extensive it is better to perform the above surgery. But if the patient has a desire for further pregnancies or if the contra lateral tube is damaged the best approach would be perform a conservative surgery provided the rupture is small and the haemostasis and haemodynamic stability could be achieved. These conservative techniques such as salpingostomy or

**Consultant Obstetrician and Gynecologist,*
Department of Obstetrics and Gynecology, Teaching Hospital, Batticaloa, Sri Lanka

salpingotomy may increase the rate of persistent ectopic and recurrence with non significant increase in the intrauterine pregnancy rates.

The historical techniques such as salpingo oophorectomy or hysterectomy are not performed for tubal ectopic in this modern era since they not only increase the operating time, cost and also the morbidity, without any additional advantages.

Management of Unruptured Ectopic Gestation

Most of these patients are asymptomatic and only diagnosed by ultrasound and biochemical assays. Since these hormonal assays are too expensive and due to lack of high resolution ultrasound machines in countries like ours we have limited experience with these patients. Diagnosing at this stage will improve the fertility rate of the woman and reduce the morbidity and mortality.

(a) Surgical Options

Minimal Access Surgery will be the method of choice in most of the cases (21). If the contra lateral tube is diseased or fertility is desired the incision is made on the anti mesenteric border of the fallopian tube over the site where the ectopic gestation is located and the contents are evacuated. During salpingostomy the incision site is left open after achieving haemostasis but in salpingotomy incision site of the tube is primarily sutured (19,22). The former approach is mostly performed in United States. Two year Intrauterine pregnancy rates were 45 % with salpingostomy and 21% with salpingotomy. Hence tubal function recovers faster if the incision site is allowed to heal spontaneously. The recurrent ectopic pregnancy rates were comparable with both methods.

Laparotomy is preferable over the laparoscopy if the sac is more than 5 cm in diameter(10). Also studies comparing laparoscope with laparotomy have shown that the former minimizes the blood loss, operating time, hospital stay, allows early return to normal activity with minimal adhesions (9). However the rate of Persistent Ectopic Pregnancy is 16% after laparoscopy and only 2% after invasive surgery (16).
In the presence of healthy opposite fallopian tubes the outcome of studies are conflicting regarding the benefits of conservative surgery over radical operation (11). Most of these are observational studies which indicate higher IUP rates (17) with salpingotomy (66 87%) compared to salpingectomy (34 - 65 %). The salpingotomy has 56% chance of recurrent ectopic gestation in contrast to 36% after salpingectomy (11,16). Similarly repeat surgical intervention rates due to bleeding or persistent trophoblastic activity are higher with the former approach than the latter.

Fimbrial expression and partial salpingectomy are the other forms of operations to conserve the tube. The fimbrial expression is milking out of the contents of the ectopic via the diseased tube. This technique is rarely used since it has

24% recurrent ectopic rate and persistent ectopic rate. Partial salpingectomy is mostly performed in ruptured ectopic and in few unruptured ectopic when haemostsis cannot be achieved after salpingostomy or salpingotomy.

(b) Medical Options

The suitable candidates for medical management could be those women with the Serum hCG < 3000 IU, sac less than 4 cm and no evidence of free fluid in the abdomen either clinically or by ultrasound.

Many agents such as Methotrexate, KCl, Urea, Hypertonic saline and Prostaglandins (6, 7) had been injected either via laparoscope into the sac or systemically. 80% repeat tubal pregnancy rates have been shown after injecting Methotrexate directly through laparoscope. Multiple injections of Methotrexate causes adverse effects such as GIT symptoms, stomatitis, conjunctivitis and liver function abnormalities.

At present the Methotrexate is injected intramuscularly in single or multiple doses. The Methotrexate is given at the dose of 50 / sqm intramuscularly (7,18) and Serum hCG levels are monitored from day 1 to day 3. There may be a transient increase in the levels of Serum hCG followed by 15% drop on the 4^{th} to the 7^{th} day (12). During this period of drop in the Serum hCG levels the patient may experience excruciating pain which may be due to tubal abortion of ectopic (15). But more importantly this pain should not be confused with the pain related to tubal rupture which could occur simultaneously in 7% of patients receiving this treatment (18,20). Since this is a life threatening condition patient education and close monitoring during this crucial period is mandatory.

If the anticipated fall of serum hCG does not occur the Methotrexate need to be repeated in single or multiple doses while monitoring for the reduction of Serum hCG. Eventually there is a possibility that 10% of this group of women may need surgical intervention either for ruptured ectopic or Persistent Ectopic Pregnancy. These women should be advised to avoid sexual intercourse during the treatment and observation. They too should be counseled to use a safer form of contraception for the next three months.

(c) Expectant Management

The patients who are suitable for this form of treatment are those who are asymptomatic with serum hCG levels less than 1000 IU (2). At this level of Serum hCG if a gestational sac is not seen within the uterine cavity, with or without an adnexal mass it should be presumed that the patient is either having an ectopic or miscarriage. This group of patients can be observed with the adnexal mass that should be less than 3 cm and the Serum hCG levels should not rise every other day (as in normal viable intrauterine pregnancy) or should not plateau (5). In contrast the serum hCG should reduce

during this surveillance period without any form of medical or surgical intervention. This form of treatment have to be abandoned and surgical or medical treatment will be resorted if the serum hCG levels rise, had not reduced by 70% within the first week or if the symptoms.

Persistent Ectopic Pregnancy

This new concept has been recognized after the increasing use of laparoscopy for therapeutic management of ectopic pregnancies and also after frequent use of conservative surgical operations such as salpingostomy, salpingotomy, fimbrial expression and medical management (4, 8). This concept is recognized frequently due to improved diagnostic tools such as Serum hCG and Serum Progesterone.

Persistent Ectopic Pregnancy (PEP) is diagnosed if day 9 Serum hCG levels are > 10% of the initial value(12,15). This incidence is reported to be 5% after salpingostomy and 4 – 8% following salpingotomy which are higher than salpingectomy (<0.01%). The PEP rates are 1.5 fold higher with laparoscopy than laparotomy. Pre treatment Serum hCG levels > 3000 IU, rapid increase of Serum hCG and presence of active tubal bleeding are the factors which would suggest that there is increase the risk of PEP. Since these patients with PEP are having a risk of tubal rupture they should to treated. They are usually offered Methotrexate injected intramuscularly in single dose and should be followed up like those under medial treatment for ectopic pregnancy (8,13,18). The surgical re intervention such as salpingectomy through laparoscope or laparotomy may be needed for symptomatic patients.

Ectopic pregnancies of other sites

The incidence of ovarian ectopic gestation is 1: 200 ectopic pregnancies and is difficult to diagnose. This condition may be confused with the complicated ovarian cyst. Resection of ectopic is commonly performed than oophorectomy.

A very rare form of ectopic pregnancy is the cervical ectopic which is reported to be 1: 7000 ectopics. Various pathological criteria had been used for the diagnosis. Many pathological conditions such as polyp, fibroid even carcinoma could mimic this condition. Local injection of potassium chloride and Methotrexate have been advocated. Uterine artery embolisation has also being tried for these patients. Hysterectomy is rarely performed (23).

Primary and Secondary Intra Abdominal Pregnancies have been reported with various rates of incidence. Mostly these patients are diagnosed late in the pregnancy and some only at the time of laparotomy. Since it is advanced pregnancy the fetus may be mature and very rarely alive. In such patients the fetus is delivered, but the placenta may be morbidly adherent to the underling great

vessels, large or small intestine and removing it may be dangerous. In such patients it is advisable to leave the placenta with the placental bed and (3) Methotrexate is given intramuscularly.

Heterotrophic pregnancy where there is coexisting intra uterine and an extra uterine pregnancy occurs 1:10,000 - 1:30,000 of pregnancies. In such cases it is better to treat the ectopic site with minimal disturbance to the intra uterine pregnancy. Spontaneous miscarriage could occur during this procedure.

Conclusion and Recommendation

Scientific advances have lead to early diagnosis of ectopic pregnancy and managing them at the unruptured state. This had not only reduced the maternal mortality and morbidity rate but also increased the fertility and fecundity rate. Provision of services such as serum hCG and trans vaginal scan and therapeutic laparoscopic instruments are essential to achieve this goal in countries like Sri Lanka. Also gynecologists and assistants need training to use these instruments safely to improve their quality of care and reduce the maternal mortality rate.

References

1. Bangasgard N, Lund C, Ottensen B, Nilas L. Improved fertility following conservative surgical treatment of ectopic pregnancy. Br J Obstet Gynaecol 2003;110:765 -70

2. Benerjee S, Salam N,Woelfer B, Lawrence A, Elson J, Jurkovic D. Expectant Management of early pregnancies of unknown location: Prospective evaluation methods to predict spontaneous resolution of pregnancy. BJOG 2001;108:158 -63.

3. Delke I, Veridiano NP, and tracer ML: Abdominal pregnancy : review of current treatment and addition of 10 cases. Obstet Gynecol 1982;60:200-204.

4. Graczykowski J, Mishell D. Methotrexate prophylaxis for persistent ectopic pregnancy. Obstet Gynecol 1997;89:118 122.

5. Halin M, Thorburn J, Bryman I. The expectant management of early pregnancy of uncertain site. Hum reprod 1995;10:1223-7

6. Lindblom B, Hahlin M, Lundroff P and Thornburn J: Treatment of tubal pregnancy by laparoscopy guided injection of ProstaglandinF2. Fertil Steril 1990;54:404- 406

7. Lipcomb G, Bran D, McCord M, Portera J,Ling F. Analysis of three hundred and fifteen ectopic pregnancies treated with single dose Methotrexate. Am J Obst Gynecol 1998;178:1354-8.

8. Lundroff P, Hahlin M, Sjoblom P, Lindblom B. Persistent Trophoblast after conservative treatment of ectopic pregnancy: Prediction and detection. Obstet Gynecol 1991;77: 129 – 33

9. Lundroff P, Thornburn J, Hahlin M, et al: Adhesion formation after laparoscopic surgery verses

laparotomy in tubal pregnancy: a randomized trial. Fertil Steril 1991;55:911-15.

10. Mohamed H, Matti S, Phillipsg. Laparoscopic management of ectopic pregnancy 5 year experience. J Obstet Gynecol 2002;42:538-42.

11. Mol BW, Hajenus PJ, Engleshbel S, Ankum WM, Hemrika DJ, van der Veen E, et al. Is conservative surgery for tubal pregnancy preferable to salpingectomy. Br J Obstst Gynaecol 1997;104:834-839.

12. Pouly J, Chapron C, Mage G, Mahnes H, Wattiez A. The drop in the level of hCG after conservative laparoscopic treatment of ectopic pregnancy. J Gynecol Surg 1991;7:211-7.

13. Rose PG and Cohen SM: Methotrexate therapy for persistent ectopic pregnancy after conservative laparoscopic management. Obstet Gynecol 1990;76:947- 951.

14. Royal College of Obstetricians and Gynecologists. The management of tubal pregnancy Guideline 21 2004

15. Saraj A, Wilcox J, Najmadadi S, stein S, Johnson M, Paulson R. Resolution of hormonal markers of ectopic gestation: a randomized trial comparing single dose of Methotrexate with salpingostomy. Obstet Genecol 1998;92:989-94.

16. Seifer DB,Gutmann JN,Grant WD, et al: Comparison of persistent ectopic pregnancy after laparoscopic salpingostomy verses salpingostomy at laparotomy for ectopic pregnancy. Obstet Gynecol 1993;81: 378 - 83.

17. Silva P, Schaper A, Rooney B. Reproductive outcome after 143 laparoscopic procedures for ectopic pregnancy. Fertil Steril 1993; 81: 710 – 5

18. Stovall TG, Ling FW, Gray LA, et al. Methotrexate treatment of unruptured ectopic pregnancy: a report of 100 cases. Obstet Gynecol 1991;77: 749- 52.

19. Tulandi T, and Guralnick M Treatment of tubal ectopic pregnancy by salpingotomy with or without tubal suturing and salpingectomy. Fertil Seril: 1991; 55:53 – 55.

20. Tulendi T, Hemmings R, Khalifa F. Rupture of ectopic Pregnancy in women with low and declining Serum human chorionic gonadotropin concentrations. Fertil Steril 1991; 56: 786 – 7

21. Tulandi T, Saleh A. Surgical Management of ectopic pregnancy. Clin Obstet Gynecol 1999; 42 : 31 - 8

22. Vermish M, Silva P, Rosen G, Stein AL, Forsum GT, Sauer MV. Management of unruptured ectopic Gestation by linear salpingostomy: A Prospective, Randomized Clinical Trial of Laparoscopy vs Laparotomy. Obstet Gynecol 1989, 73: 400 – 4

23. Wong YH, Liang EY and Lau KY. Cervical ectopic pregnancy managed medical treatment and angiographic embolisation. Aust NZ J Obstet Gynecol 1999;39(4):493.

Quality of life – an important concept in cancer management

A.J.Hilmi*

Quality of life is an important concept in the evaluation of the efficacy of treatment offered to cancer patient. After the diagnosis of cancer it is very difficult to quantify a person's life and the qualify of that life. For many of us, the practical application of the quality of life concept in day to day clinical practice remains an ill-defined task. However there is no doubt that, in palliative setting, it provides a direct assessment of the response to treatment.

Karnofsky (1949) who made attempts to measure the performance status of patients with advanced cancer. His physician's administrated scale is uni-dimensional and was used to quite extensively in clinical practice, especially in early cancer therapeutic trials. Nowadays the physicians involved in cancer management and care are quite convinced that quality of life is a multi-dimensional concept. It involves a patient's social, emotional and physical well-being. Our clinical experience teaches us that therapeutic practices in oncology should be designed and directed towards improving the quality of life of the patient.

An adequate measurement of the biological course of disease can be done by standard objective investigations but it is a challenge for us to incorporate valid measurement of quality of life in clinical practice to show the better management options in day –to-day clinical practice.

Historically, total or disease free survival was taken as a valid endpoint in clinical trials. Now there is an increasing realisation of the need to achieve a more comprehensive evaluation of treatment beyond the objective of achieving ultimate survival, maximum tumour response and minimal toxicity (1). Thus, quality of life assessment is introduced as an important additional end point in contemporary cancer clinical practice.

Measurement of quality of life

According to the WHO definition, health is a state of complete physical, mental and social well-being. A person's quality of life is measured by obtaining a set of clearly defined quantifiable factors. One can appreciate that this is a multi-dimensional concept comprising elements of the patient's emotional, mental and physical well-being.

It is undisputed that a detailed interview is a best approach to comprehensively evaluating the individual's well –being. One should be aware of the limitation of measurements done by a physician. Since it is generally agreed that there is no valid measurement for quality of life as it contain so many different things to so many different people. Thus one has to rely primarily on the patient's own judgement.

* *Consultant Oncologist, G.H.Anuradhapura, Batticaloa and Trincomalee.*

One can draw one's own conclusions from the interpretation of various concerts employed from various studies. Priest man and Baum (1979) developed a 10 point questionnaire to be completed by patients. The patients were asked to make their responses as a distance on a line proportional to the severity of their symptoms. This assessment was termed Linear Analogue Scale Assessment (LASA) and showed that the quality of life of patients with breast cancer could be measured and reflected clinical outcome. In 1981, Spirzer attempted to use a five point instrument which was essentially a measurement of global of life (2).

A Functional Living Index of Cancer (FLIC) was proposed by Schipper er al (1985) which was formally tested for its ability to produce data that had psychometric properties and was found to be quite reproducible (3). During the last decade some other scales have gone through extensive investigations and were found to be quite useful in various clinical setting, e.g. the Rottendam symptoms checklist, and the European Organisation for Research and Treatment of Cancer (EORTC) core quality of life questionnaire.

In cancer therapeutic trials, quality of life has been essentially limited to components that are health related and can be summarised by a minimum of four types of domain. These include the physical, psychological and social functions along with symptoms of the disease and its treatment. It does not mean that other factors such as cultural, spiritual and economic issues are ignored. It is much appreciated that these factors do in fact alter a patient's perception of quality of life, but these are mostly independent of disease and its management, and that is why they are not used to precisely judge the response to medical treatment.

Questionnaire

Olschewski and Altman have described what they believe to be the properties of an ideal questionnaire. According to them a good questionnaire is categorised by certain so- called psychometric standards such as;

- ❖ Validity – it should measure what is intended to be measured,
- ❖ Reliability- measured with sufficient precision,
- ❖ Sensitivity-have the ability to detect changes.

There are some important factors that we have to keep in mind when dealing with health related quality of life in cancer patients. There are two basic approaches, which can be devised in the form of a questionnaire. First of all, an instrument that is generalised across a variety of diseases in oncology must be designed. The questionnaire widely used is made by the European Organisation for Research and Treatment of Cancer which is known as QLQ-C30 and has all the relevant general cancer symptoms covered by 30 questions. This questionnaire is now used in various contemporary cancer therapeutic trails and is widely accepted as a standard instrument (4).

Secondly it focuses on specific disease or a specific form of treatment, as we have seen with prostate cancer's specific quality of life. This index was used in the Canadian randomised trail of mitoxantrone plus prednisalone or prednisalone alone in hormone – resistant prostate cancer. The benefit of employing the specific approach is that symptoms limited to a particular form of cancer or a particular form of management can be explored using a brief questionnaire.

Objective versus subjective approach

Patient's and doctor's assessment of quality of life rarely coincide and with such a personal issue we have to give priority to the patient's viewpoint. **We have to rely primarily on the patient's own judgement and cannot forget the fact that the concept of quality of life is quit fluid and is subject to change over a person's life time.** The objective approach was found to be inappropriate in some studies. It was reported that the doctors are unlikely to correctly determine what the patients felt.

We need a very good co-ordination between the patient and physician for the assessment of quality of life. In the setting of cancer management, one can assume that tumour response can be translated into palliative benefit, which means that the quality of life of the patient has improved. As we know that the quality of life is a multi dimensional concept, patients have their own perspective and they have their own way of looking and assessing their disease and response to treatment.

Quality of life in cancer research

When the aim and objective of oncological management is symptomatic palliation, then the quality of life of a patient can be measured directly. This concept is generally employed with appropriate considerations to most trails employed in the treatment of metastatic adult cancer. I would like to quote two examples of recent clinical trails in which quality of life was used as an important prognostic parameter.

Coates made a comparison of intermittent and continuous chemotherapy treatment strategies in metastatic breast cancer. It was observed that continued cycle of palliative systemic chemotherapy has produced an improvement to several aspects of quality of life as compared to short course given intermittently. The same trail has shown that quality of life scores have prognostic value in the duration of survival (5).

Tannock et al have reported that a full dose CMF systemic chemotherapy regime was found to be superior to low dose chemotherapy in improving quality of life (6). These trails have helped us to establish the benefit of using systemic chemotherapy in the palliation of the cancer management.

Conclusions

Quality of life is assessed by patients is the principal target of clinical practice. It is an important concept and we all agree that every effort should be made to improve the quality of life of the patients. The challenge is to measure it with a valid and reliable

method. Most of the patients seen in our oncology practice are not participates of a clinical trial. Nevertheless their quality of life must be assessed, as this important concept cannot be ignored in these patients. In my opinion, one has to enhance one's clinical skill in order to get a proper understanding and clarification of this concept. I conclude that we need more work to be done on the standardisation of questionnaire in future.

Reference:

(1) Maguire P, Selby P. Assessing quality of life in cancer patients. Br. J Cancer 1989; 60: 437-40.

(2) Spitzer WO, Dobson AJ et al. measuring the quality of life in cancer patients. A concise QL index J Chronic Disease 1981; 34: 585-97.

(3) Schipper H, Clinch J et al. The functional living index-cancer; development and validation. J of clinical Oncology May 2 1984; 5: 472-83.

(4) Aaronson NK, Ahmedazi S et al. The EORTC QLQ-C30 J National Cancer Inst. 1993; 85: 365-76.

(5) Coates A. Improving the quality of life during chemotherapy in advanced breast cancer. N Eng J Med 1987; 317: 1490-5

(6) Tannock IF, Boyd NF et al. A randomised trial of two dose level of CMF for patient with metastatic breast cancer. J Cli Oncol. 1988; 6; 1377-87.

Role of insulin in type 2 diabetes

K.Thiyagesan*

Introduction

In type-2 diabetes there is a progressive secretary failure of the beta cells. The great majority of patients presenting over the age of 40 will have type 2 diabetes. The diabetes slowly worsens over years and those patients, who are initially adequately controlled with diet, or diet and a tablet, will need gradual increases of their treatment over time, even when adhering well to their diet. For most patients tablets will eventually fail to achieve adequate metabolic control and change to insulin treatment will become necessary. The most widespread error in management at this stage is procrastination; **the patient whose control is inadequate on oral therapy should start insulin without undue delay.** (Consider insulin in all type 2 patients if HbAlc >9% and in selected cases when HbAlc >8%)

Myths and concerns about insulin use in type 2 diabetes

Nevertheless, there is widespread confusion on the subject. There are both, unfounded as well as genuine fears about insulin use in type 2 diabetes.

• The name non-insulin dependent diabetes makes people to conjecture that insulin is not required for these patients, some even assume that insulin is contra-indicated. Nothing can be further from the truth. To correct this fallacy the American Diabetes Association has changed the nomenclature of NIDDM to type 2 diabetes and the WHO is likely to follow suit.

• It is assumed that once a patient is put on insulin he will continue requiring insulin for the rest of his life. Patients with type 2 diabetes are able to produce some insulin and it is wrongly assumed that exogenously administered insulin will lead to disuse atrophy of the beta cells and make these patients dependent on exogenous insulin. This never occurs in clinical practice, on the contrary severe hyperglycemia reduces the beta cells ability to produce insulin because of glucotoxicity. Exogenous insulin by controlling hyperglycemia reduces glucotoxicity, provides rest to the stressed beta cells and restores their function.

• There is concern that insulin use is associated with increased risk of hypoglycemia. Any pharmacological intervention to correct hyperglycemia, be it insulin or sulphonylureas is capable of causing hypoglycemia. The risk of hypoglycemia with insulin in patient with type 2 diabetes is not significantly greater than with sulphonylureas as shown from the UKPD Study.

• Another argument against insulin use in patients with type 2 diabetes is that patients do not accept it easily. While this is true to a great extent it is not an insurmountable barrier. In patients genuinely requiring insulin, this resistance can be over come by

*Senior House Officer, Medical unit, T.H.Batticaloa.

proper explanation for its need and the benefits it will provide. Giving a trial for a few days with the assurance of review, often overcomes this initial fear. With improved control and better quality of life that patient's experience, and having overcome the initial fear of injection, most of them do not find insulin therapy as intimidating as they initially assumed and are often willing to continue on it.

• Another worry is weight gain. This is due to the fact that with improved metabolic control, patients are less glycosuric and hence gain a few kilograms, also insulin stimulates appetite. Weight can be avoided with appropriate dietary control and should not be a reason to withhold insulin.

• Next issue is the potentially atherogenic and hypertensinogenic potential of insulin. While some studies have linked insulin resistance and endogenous hyperinsulinemia with increased risk of atherosclerosis and hypertension. There are other studies that have failed to show this association. Recent studies have raised doubts as to whether this may be due to hyperinsulinemia. The new studies have alternately suggested that proinsulin and its split products may be responsible for this increased risk.

Insulin in the management of type 2 diabetes

Patients with type 2 diabetes who have persistent hyperglycemia despite diet, weight reduction and exercise are typically first started on an oral hypoglycemic drugs. Insulin is usually added only if inadequate control persists despite use of these drugs. However there are increasing data to support using insulin earlier and more aggressively in type 2 diabetes. When treated early with insulin, patients with type 2 diabetes can have remission of at least several years duration, during which HbAlc is normal without any medication.

Moreover, it is important to remember that although type 2 diabetes has a peak incidence around the time of puberty, approximately twenty five percent of cases present after 35 years of age. There are certain clinical features, which, it presents at any age, suggest the necessity for maintenance insulin therapy. (i.e.: Marked and otherwise unexplained recent weight loss, a short history with severe symptoms and the presence of moderate to heavy ketonuria.)

The initial dose of insulin in patient with type 2 diabetes whose dietary regimen is stable and who have no intercurrent illness can be determined using the patient's mean fasting blood glucose concentration (which is usually stable) and the degree of obesity.

Recommendation

If diet and exercise goals or the desired level of glycemic control are not reached after two to three months, the patient should be started on drugs therapy

.

• A sulphonylurea or metformin is a reasonable first line oral agent for patients with type 2 diabetes. The side effect profile may favour metformin over Sulphonylureas.

• Patients who are under weight, are losing weight, or are ketotic should be started on Insulin, regardless of age.

Insulin can be considered a first line

therapy for all patients' type 2 diabetes.

- If inadequate control is achieved with one medication, addition of a second oral agent with a different mechanism of action, or addition of or substitution with insulin, is advisable. Addition of metformin to sulphonylurea therapy when the later fails to correct hyperglycemia only temporarily delays insulin addition at the cost of significantly higher risk of morbidity and mortality.

- An intermediate insulin given at night with metformin during the day is initially as effective as multidose insulin regimens in controlling glucose levels, and is less likely to promote weight gain. A second morning dose of insulin may become necessary to control postprandial hyperglycemia

- Twice-daily injections of premixed soluble and isophane insulin (e.g. Mixtard or Humalin M insulins) are widely used and reasonably effective.

- Patients with type 2 diabetes often need insulin to control hyperglycemia either at presentation due to the severity of hyperglycemia or during periods of stress, surgery, infection, labour and delivery; as well as during other medical problems such as myocardial infarction, cerebrovascular disease, hyperosmolar coma or acute painful diabetic neuropathy. These patients need insulin for short period to tide over the crisis.

Summary

The above facts clearly show that while insulin therapy raises concerns in both patients and physicians it will be needed by most patients with type 2 diabetes. When used appropriately it corrects hyperglycemia despite deteriorating beta cells function and without causing undue risks. Use of multiple therapies, solely for the intention of delaying Insulin use may give temporary results but with significantly higher risks of morbidity and mortality.

Further Reading:

1. David meculloch. MD. Up to date vol.13. No.

2. Albert K G Mn, Gries FA. Management of Non- Insulin Dependent diabetes Mellitus in Europe; A consensus view Diabetic medicine 5; 275, 1988.

3. Heine RJ. Insulin treatment of Non-Insulin Dependent diabetes mellitus. Bailliere; Clinical. Endocrinology and metabolism. 2:474-492-1988.

4. Taylor. R, Insulin for Non-Insulin Dependent BMJ 296, 1015, 1988.

5. Management of Type 2 Diabetes Mellitus, In: Physicians guide to Non insulin Dependent Diabetes: Diagnosis and Treatment 2nd Ed, American Diabetes Association 25-53, 1991.

Breast milk and breastfeeding

S. Anputhasan*

What is Breast milk?

Breast milk is a natural food for full term and most pre-term infants. It has been uniquely developed to be appropriate in composition for the human newborn infant. It is readily available at the proper temperature and needs no time for preparation. The milk is fresh and free of contaminating bacteria. Human milk provides energy about 67 – 70 calories/100ml.

It contains 1 – 1.5% of protein (approximately 65% whey protein largely lactalbumin and 35% casein) 6.5 to 7% of fat, minerals (sodium, calcium, phosphorus and iron) and vitamins (vit.A, C, E, B6 and folic acid) but some of these content (mainly fat and vit.A) varies somewhat with maternal diet. Human milk also contains lymphocytes, macrophages, bacterial and viral antibodies, including relatively high concentrations of secretary IgA antibodies, which are responsible for immune activity. Breast milk production and secretion are controlled by prolactin and oxytocin hormones respectively which are stimulated by continued suckling and emptying the breast by infants.

What is colostrums?

The secretion of the breasts during the latter part of pregnancy and for the 2 – 4 days after the delivery is called colostrums. It is thick and deep lemon yellow or clear in colour. It contains several times the protein (Anti – infective protein and antibodies) of mature breast milk , more minerals but less carbohydrate and fat. It contains more white blood cells than mature milk. Colostrum is also richer than mature milk in some vitamins especially vitamin A.

The advantage of a baby having breast milk

1) It contains exactly the nutrients that a baby needs.
2) It is always freshly available and easily digested and efficiently used by the baby's body.
3) It protects a baby against infection such as diarrhoea, respiratory infection and ear infection.
4) It reduces risk of allergies such as atopic eczema and bronchial asthma.
5) It reduces risk of diabetes mellitus.
6) It improves intelligent of the child.

**District Medical Office, D.H. Arayampathy*

" All other milks are different from breast milk and not as good for a Human baby"

The advantages of a baby having colostrums

1) It provides the first immunization against the diseases that a baby meets after delivery.
2) It helps to prevent the bacterial infections that are danger to newborn babies.
3) It contains antibodies which probably also help to prevent a baby from developing allergies.
4) It has a mild purgative effect which helps to clear the baby's gut of meconium. This clears bilirubin from the gut and helps to prevent Jaundice.
5) It contains growth factors which help a baby's immature intestine to develop after birth. This helps to prevent the baby from developing allergies and intolerance to other foods.
6) It is rich in vitamin A which helps to reduce the severity of any infections the baby might have.

"Babies should not be given any drinks or other milk before they start breast feeding. Artificial feeds given before a baby has colostrums are especially dangerous"

Breastfeeding

Breastfeeding is fundamental to child health and survival, and important for the health of women. It should be started as soon as possible after birth. Over the first 24 hours the baby will probably only wish to feed three to four times and may be quite sleepy between feeds. By the fifth day the baby at the breast will be demanding feeds nearly 2 hourly. Any way, over the first few weeks, it is necessary to encourage our mothers to feed the baby more frequently to avoid dehydration and dehydration Jaundice. Breast feeding mother should take healthy food such as meat, poultry, milk, fresh vegetables, green leafy vegetables and fruits.

"For a mother to produce enough milk, her baby must suckle often enough and he must also suckle in the right way"

The advantages of breast feeding

1) It costs less than artificial feeding.
2) It helps a mother and baby to bond that is, to develop a close loving relationship.
3) It helps a baby's development.
4) It can help to delay a new pregnancy.
5) It protects a mother's health.
    a) It helps the uterus to return to its previous size. This helps to reduce bleeding and may help to prevent anemia.
    b) Breast feeding also reduces the risk of

ovarian cancer and possibly breast cancer in the mother.

6) It can maintain body built and help to prevent obesity of the mother.

"Breast feeding not only protects a baby but also protects a mother's health in several ways and can benefit the whole family, emotionally and economically"

Recommendations

- Start breastfeeding within ½ -1 hour of birth.
- Breastfeed exclusively from 0-4 months of age.
- Complementary food can begin between 4-6 months (Exact age varies)
- Give complementary foods to all children from 6 months of age.
- Continue breastfeeding up to 2 years of age or beyond.

Methods of breastfeeding

It is important to ensure that the baby is both correctly positioned and attached for successful breastfeeding.

1) Mother should be comfortable and relaxed and sit down herself in a convenient position.
2) Wash breast with clean water before start feeding.
3) Gently roll nipple between your fingers to help it stand erect then baby will be able to grasp it more easily.
4) Mother holds here baby securely and feels confident.
5) She looks at him/ her touches him/ her and talks to him/ her for bonding.
6) Holds the baby close to the breast by same side of the hand, head and shoulders facing the breast.
7) Keep the baby's head and body straight and the nipple and baby's nose in a same level.
8) She may support her whole breast with her hand against chest wall and if necessary shape her breast with her thump above the breast.
9) Encourage the baby to grasp nipple by expressing small amount of milk from breast and brush it against lips.
10) For good attachment to the breast and sucking.
    a) The baby's chin touching the breast
    b) Mouth wide open
    c) Lower lip turned outwards
    d) Cheeks round or flattened against his/ her mother's breast
    e) More areole above the baby's mouth than bellow it.
    f) The breast looking rounded during a feed
11) Allow the baby to feed until releasing the breast himself / herself
12) Offer both breasts at each feeding. If you finish a feed on the left side, begin with the same breast at the next feeding.
13) Burp the baby and gently pat him / her on back to release swallowed air by resting her /

him on your shoulder or in your lap.

14) After breast feeding, wipe breast with clean cloth or allow them to dry naturally before dressing.

Breastfeeding can be given to the baby in lying down position. Mother should find the position that is most comfortable for her.

There are other methods of holding her baby.

a) Underarm position
Useful for – Twins
– Difficulty attaching the baby

b) With the arm opposite the breast
Useful for – Very small babies
Sick babies

How to increasing feeding mother's breast milk supply

1) Make sure that she has enough to eat and drink

2) If you know of a locally valued lactogogue encourage her to take that (That may help her to feel confident and relaxed)

3) Encourage her to rest more and try to relax when she breast feeds

4) Explain that she should keep her baby near, give him / her plenty of skin to skin contact.

5) Explain that the most important thing is to let her baby suckle more, at least 10 times in 24 hours, more if she is willing.

- She can offer her breast every two hours,
- She should let the baby suckle whenever she seems interested,
- She should let the baby suckle longer than before at each breast,
- She should keep the baby with her and breast feed at night,
- Some times it is easiest to get a baby to suckle when he is/ she sleepy.

6) Make sure that her baby attaches well to the breast.

7) Advise the mother how to give the other feeds a cup, not from a bottle, if she has inadequate milk secretion. Most of our feeding mothers complain that their milk secretion is poor and not adequate for their baby's demand. It is necessary to check the baby's weight gain and urine out put to make sure that, whether he is getting enough milk or not before starting artificial feeding.

Advice to be given to the breastfeeding mothers who are working

1) Breastfeed exclusively and frequently for the whole maternity leave. (The first two months are most important)

2) Learn to express your breast milk soon after your baby is born.

3) Express your breast milk before you go to work and leave it for the carer to give to your baby. (You can leave the expressed milk in a refrigerator for 24hr. or in a

safe, dark place at room temperature for 4 – 6hr.)

4) Breastfeed your baby after you have expressed.
5) Continue to breast feed at night, in the early morning and at any other time that you are at home.
6) Do not start other feeds before you really needs to.

"It is not necessary to use a feeding bottle at all. Even small babies can feed a cup because, bottle feeding is discouraged to give the breast feeding.

Reference

1) Breast feeding Councilling Published by W.H.O and Unicef – 1993.
2) Training Manuel Published by W.H.O and Unicef –1993
3) A Manuel of Neonatal Intensive Care
4) Forfer and Arneil's Text Book of Paediatrics.

Banded rofecoxib

T.Kingston Nimaladev*

Rofecoxib withdrawal announced by Merck & Co. on September 30th 2004, from the market. This withdrawal is voluntary and is based on results from a recent clinical trial designed to evaluate rofecoxib's effectiveness in preventing the recurrence of colorectal polyps.

The study noted an increased relative risk for cardiovascular events, and was stopped early for safety reasons. Patients taking rofecoxib chronically were noted to have twice the risk of heart attack when compared to patients taking placebo.

FDA – Food and Drug Administration originally approved VIOXX [Rofecoxib] is a prescription COX – 2 selective non steroidal anti inflammatory drug [NSAID] that was in May 1999, for the relief of signs & symptoms of osteo arthritis for the management of acute pain in adults, and for the treatment of menstrual symptoms. It is also approved for the relief of the signs & symptoms of Rhecimatoid arthritis in adults & children.

The original safety database included approximately 5000 patients, on VIOXX and did not show an increased risk of heart attack or stroke. A later study – VIGOR [VIOXX GI outcomes research] was primarily designed to look at the effects of VIOXX on side effects such as stomach ulcers & bleeding and was submitted to the FDA in June 2000. The study showed a greater number of heart attacks in patients taking VIOX.

The VIGOR study was discussed at a February 2001 Arthritis – Advisory Committee and the new safety information from this study was added to the labeling for VIOXX in April 2002.
Merck then began to conduct longer term trials to obtain more data on the risk for heart attack & stroke with chronic use of VIOXX.

Clinical study called APPROVE [Adenomatous polyp prevention on VIOXX] trial conducted. On this trial VIOXX compared to placebo [Sugar pill] purpose of this trial was to see if VIOXX 25mg was effective in preventing the recurrence of colon polyps. During this 3 years clinical study cardiovascular events such as heart attack & stroke were noted among the patients taking rofecoxib 25mg compared to those taking placebo. This risk was increasing beyond 18 months of continuous treatment specifically.

Adverse reactions related to cardiovascular system were peripheral oedema [4%] Hypertension [10%], others were chest pain, upper extremity oedema, atrial fibrillation, Brradycardia, arrhythmia, palpitation, tachycardia, venous insufficiency, fluid retention [0.1 – 2%]

VIOXX has been associated with several serious and often life threatening effects involving cardiovascular system, such as heart attack, stroke, blood clots, angina, high blood pressure.

**Senior House Officer - Medical Unit, Teaching Hospital, Batticaloa*

VIOXX is a COX – 2 selective non steroidal Anti inflammatory drug, other COX – 2 selcctive NSAID on the market at this time are celebrex [Celecoxib] and Bextra [Valdecoxib]. The results of clinical studies with one drug in a given class do not necessarily apply to other drugs in the same class.

Officials don't know yet how the drug may be causing the increased risk.

Reference:

- 2005. up to Date – www.uptodate.com . (800) 998-6374.(781) 237-4788
- http//www.vioxx.com
- http://www.fda.gov/bbs/topics/news/2004/NEW01122.html
- http://.hc-sc.gv.ca/english/protection/warnings/20042004.50htm.
- http://www.fda.gov/cder/drug/infopage/vioxx/vioxx QA.htm.
- The American Journal of cardiology vol.92. August. 15,2003.

War and suicide in different communities in the East

M. Ganesan*

Summary

The suicide rate is quite high in Sri Lanka. Deliberate self harm too is very common. The rate is high in the east of the country as well. The few studies that compare suicide rates between Tamils and Muslims show very different rates. The reasons for this difference are not clear. Using an ethnographic method this study looks at one possible reason for the difference that is observed in deliberate self harm rates here in Batticaloa. Among the other themes that emerged, the effect of war was one which came up in many of them. War related incidences played a significant role in the decision to self harm in many of the cases. Death of a relative and injury were more important than displacement. Tamils in the study had more wart related suffering than the Muslims. This may be a reflection of the general trend that is seen in the region.

Introduction

Suicide is a major health and social problem in Sri Lanka. At 30.1/100,000 inhabitants, the suicide rate in Sri-Lanka is one of the highest in the world (1). Especially a large number of young lives are lost in our country due to this reason. More people have died of suicide than the ongoing ethnic war in the last fifteen years (2). The real suicide figures are likely to be much higher. The reasons for the high suicide rate are not very clear. Agrochemical poisoning is reported as the most common method in the country, followed by poisonous seeds, hanging, jumping in front of trains, and drowning. Self-immolation is generally thought to be less common (2,3). The suicide rates started to increase steeply after the sixties (4) and peaked around mid eighties (3), since then it has been fairly static around this level.

Suicide in the Tamil community in the north of the country has been studied to some extent (3,5). Suicide rate among the Tamils was high before the war at 33.3 in 1982 (5). Research among Tamils of Malaysia showed a very high rate of 157 per 100,000(6) and similarly in India too the rate among Tamils was high at 43% (7). The suicide rate in northern Sri Lanka then shows a dramatic decrease with the onset of the war. However, no research has been done for the east of Sri Lanka in the past. The author retrospectively looked at suicides over a two-year period starting from June 2000 at teaching Hospital Batticaloa and other hospitals in the district. There were altogether 160 suicides recorded over this period. From this, the suicide rate for the district would be 16/100,000 population. This is comparable to the rate of 14.5 seen in Tamils of northern Sri Lanka in 1989 (3). However, due to the war situation that prevailed during this time, civil administration was

* *Consultant Psychiatrist, Teaching Hospital. Batticaloa*

not functioning in some areas and medical care was denied to a significant proportion of the public. Suicides in these areas may have gone unrecorded.

Suicide has been uncommon among Muslims. Studies in, turkey (8) and India (9) show low suicide rates. In the study of suicide deaths in our hospital, the rate among Muslims was 6.1 per 100,000 over a two-year period. The true rate is probably lower as Muslim patients from Ampara district too are sent to Batticaloa hospital for treatment. The universally low rate that is seen among Muslims is probably due to censure of suicide by Islam. Under reporting due to the stigma too could be a factor for the low rate that is seen in this community.

There are few studies comparing the suicide rates of the Tamil and Muslim communities. Two papers from Malaysia show marked differences in the suicide rates in these two communities (10, 6).

Failed attempts to end life have been variously named as attempted suicide, para suicide, and deliberate self-harm. There is also some confusion over defining this behaviour. WHO used the following definition for its multicentre trials.
"An act with non-fatal outcome in which an individual deliberately initiates a non-habitual behaviour, that without intervention from others will cause self-harm, or deliberately ingests a substance in excess of the prescribed or generally recognized dosage, and which is aimed at realizing changes that the person desires via the actual or expected physical consequences" (11).

This definition is useful in that it leaves out the exact intention for the act, which is difficult to asses and varies with time. Deliberate self-harm is a very strong predictor of suicide. Approximately 1 percent of persons who attempt suicide will commit suicide during the following year. For 8 to 50 suicide attempters, 1 will eventually commit suicide. The risk is highest in the first year.

Self-harm is much more commoner than suicide, it is around 14 times more common. Attempted suicide rates varied between 100 and 300 per 100,000. There are other significant differences between the two groups; those who attempt and those who commit suicide represent different populations with some overlap. Females outnumber males in deliberate self-harm, generally it is the other way around in suicide. The people who self-harm are of a lower age than the people who commit suicide. These differences are gradually narrowing over the years. Mental illness is present in over 90% of the people who commit suicide. However, only around 30% suffer from mental illnesses in the deliberate self-harm population (12).

In the Sri Lankan context deliberate self–harm too is very common accounting for around 40% of intensive care beds in some hospitals (13). No studies are available in Sri Lanka comparing different communities with regards to deliberate self-harm.

Method

A case study method was used to collect data. Information was collected using ethnographic interviewing techniques. This particular method was used, as it was felt this would be sensitive enough to identify subtle cultural and social differences between the two communities. It helped to explore their value systems in depth. In addition, it was possible to investigate complex relationships and conflicts they had within and outside the family. In these interviews, patients and relatives were encouraged to tell their own story at their pace. Open-ended questions were used to help them explore different aspects of their lives.

Ten Tamil and ten Muslim patients who were admitted for deliberate self harm were selected of this study. Consent was obtained for inclusion in this study. Ethical clearance was obtained from the ethical committee in the hospital.

The ethnographic method that is used here has some advantages over a questionnaire-based method. Very often, in a questionnaire-based approach, the researcher has to decide what instruments to use. Because he or she has some preconceived ideas regarding the issue that is studied these will influence the selection of research instruments. This at times prevents novel aspects of the study population becoming apparent. Further, these instruments are often developed and tested in western countries. There are very significant cultural and social differences between the west and our society. Even after translation, it is very difficult to say how valid these instruments will be in a local setting, specially exploring cultural and social issues.

Of the many themes that emerged, effects of the war came up in many of the histories.

Results

In this war-ravaged zone, almost all families have been touched by war in some way. Tamils are generally more affected in this region than the Muslims. Naturally, this theme was seen in many histories. Histories were analysed for psychological or physical injury, displacement, and death of a family member or others. Nine patients lives were affected by war related violence. Of these, seven were Tamils and two were Muslims. All of them were affected to various degrees by the war. However, only the impact of these war related events on the decision to self-harm was studied. If the war related event had a direct impact then it was classified as a major cause for self-harm, and if it was an indirect influence then it is classified as intermediate. If it had no recognizable effect on the decision to self-harm then it was said to have minimal influence.

Table1. Psychological or physical injury

Name	Group	Sex	Nature of trauma	Impact on the decision to self harm
Aru	Tamil	M	Fear of army. Unable to go to work.	Intermediate
Yoga	Tamil	M	Fear of STF, detained twice.	Intermediate
Sum	Tamil	M	Fathers arm broken, Disabled	Intermediate
Anw	Muslim	M	Boat taken by combatants	Major
Thev	Tamil	M	Assaulted by STF	Minimal

Table2. Displacement related to the war situation.

Name	Group	Sex	Nature of trauma	Impact on the decision to self harm
Kun	Tamil	M	Displaced from border area.	Minimal
Yoga	Tamil	M	Was a refugee	Minimal
Sum	Tamil	M	Displaced, house destroyed	Minimal

Table3. Patients who lost relatives due the war.

Name	Group	Sex	Nature of trauma	Impact on the decision to self harm
Rath	Tamil	F	Husband killed by IPKF	Major
Yoga	Tamil	M	Friend beaten to death by STF Brother killed by STF	Major
Fatm	Muslim	F	Father killed in Tamil / Muslim fighting	Intermediate
Karu	Tamil	F	Brother in law missing, presumed dead	Intermediate

In three patients war related events had a major part in the decision to self-harm. Of these, two were caused by deaths in the family. One was a Muslim whose boat was taken away forcibly by

combatants. There were five instances where war related events, though present, only played a minimal role in the decision to self-harm. Three of them were related to displacement. Of the four instances where war related effects had a moderate influence on the decision to self-harm, three were due to physical and psychological trauma. This table describes these effects.

Table 4.

	Major	Intermediate	Minimal	Total
Injury	1	3	1	5
Displacement	0	0	3	3
Death	2	2	0	4
Total	3	5	4	

From this it is apparent that psychological and physical effects of the war made important contribution to self-harm. Displacement as such does not seem to be important. This may be due to the following reasons. All these displacements had taken place many years ago; none were recent. Furthermore, these were only few miles away from their original homes. All of them were living in rebuilt houses and none in refugee camps.

Death in the immediate family even though it had occurred many years ago in these patients was a major factor in the decision to self-harm. The effects of war seem to have a bigger influence among males than females.

Discussion

War and suicide has been studied extensively since the Second World War. However, the effects of war on deliberate self-harm is not known that well. Since the association between deliberate self-harm and suicide is strong, it can be expected that the trends of deliberate self-harm would generally follow the trends of suicide. Batticaloa too has been badly affected by war. The number of war widows in this district highlights the impact of the war in this region. Of all the widows, 21% are war widows. Among the Tamils, 24% of them lost their husbands to war related incidents. The number of Muslim women who lost their husbands to war accounted for 11% of the widows (14). Four patients in the study had lost a close relative to war. This is further discussed below.

Suicide rates are low in times of war. There are many explanations for this phenomenon. Two studies in Jaffna, in the north of the country, before and after the beginning of the war show a significant downward trend (15, 16). The suicide rate in Batticaloa, in the east of the island, again in a war affected area, where the study was done, too shows a low incidence compared to the national suicide rate. This suggests a reduction in suicide rates even in civil war situations. Studies from Gaza and Soweto in South Africa show psychological protection for children who identify with a struggle in the face of high violence from Israeli and South African forces (17, 18). None of the patients in the study said they were involved in combat at any time.

A high suicide rate in war veterans is well known (19) in recent times. In the war in Sri Lanka too, suicide featured prominently in the form of suicide bombers. The use of this method so commonly here, when compared to other civil war situations around the world is striking. Whether the high suicide rate in Sri Lanka is linked to this is not known. However, during the JVP led uprising in the south of the island in 1987 this phenomenon was not seen.

When we consider the people affected by war, they have a high degree of psychological morbidity (20). A study in Jaffna to asses the war related trauma found nearly half of the population has suffered between 5 to 9 war related stresses. Only 6% has not experienced any. Of the people who were affected, 64% developed psychological sequelae including somatisation, anxiety, and depression. (21). Posttraumatic stress disorder was seen in 26% of the population in that study. How many of the suicides in the time of war were influenced by it and to what extent has not been studied well. However, a link between PTSD and suicidal tendency has been suggested (22). This was attributed to changes in cognitive mapping which was similar to that of other suicidal patients. In this study, nine out of the twenty deliberate self-harmers has been affected by the war in a significant manner. Of the Tamils in the study, 7 out of 10 have suffered due to the war in some way. War related trauma was divided into three groups for ease of analysis.

War related psychological and physical trauma occurred in four of the Tamil men. Two of them have been detained and tortured. Two of them had intense fear of army and STF personnel to the extent of staying away from work, causing problems, which had an influence on decision to self-harm. Assault and detention for short periods are very common in the war areas. These are done extra judicially and are very difficult to study. One mans fathers arm was broken making him partly disabled, forcing the patient to be by his side to assist him in his work. This reduced his earning and to some extent contributed to the decision to self-harm. There was one Muslim man whose fishing boat and nets were taken away forcibly by combatants. This was the direct reason to attempt to end his life. Except one man, in all others the war related trauma contributed in a significant manner in the decision to self-harm. Some of these men above may have had clinical features of posttraumatic stress disorder. However, with the methodology used in this study it was not possible to make a precise diagnosis.

Three of the Tamils in the group were displaced and were refugees at some point in their lives. All of them are males. The displacement did not have an important influence on the decision to self-harm in any of them. The displacements had taken place many years ago. None of them were living in refugee camps at present. All of them are

living in rebuilt houses elsewhere. They are also not displaced over long distances; they live close to their original homes. These are some of the possible reasons for the low impact this had on the decision to self-harm.

Four patients in the study have lost a close relative due to the war. In all of them, this had a significant impact on the decision to self-harm, even though in some, the death had occurred many years previously. Three of them were Tamils and one was a Muslim. Of the four three were women. The dead persons were all men. However, in the traumatized group and the displaced group, all were men. Women may find it more difficult when the man who was caring for them died suddenly. This may be more significant in a war area where stresses are more common.

War contributed directly and indirectly to deliberate self-harm in a significant number of patients. This was seen more in Tamils. A few Muslims too were affected. The impact of the conflict in this regard is more in the Tamils, which reflects the overall picture of war in this region.

Reference

1. Annual Health Bulletin 2000. Department of Health Services. Sri-Lanka
2. H. J. De Silva, N. Kasthuriaratchi, S L Seneviratne, D C Senaratne, A Molagoda, N S Ellawala Suicide in Sri Lanka: Points to ponder. Ceylon Medical Journal 2000; 45: 17-24.
3. Somasundaram D, Rajadurai S. War and suicide in northern Sri-Lanka. Acta Psychiatr Scand 1995; 91: 1-4
4. Dissanayake S A W, De Silva W P. Suicide and attempted suicide in Sri Lanka. Ceylon J Med Sci 1974: 23:10-27.
5. T. Ganeswaran, S. Subramaniam, K. Mahadevan. Suicide in a northern town of Sri Lanka. Acta Psychiatr Scand.1984; 69:420-425.
6. Maniam.T. Suicide and Para suicide in a Hill resort in Malaysia. British Journal of Psychiatry (1988), 153,222-225.
7. Ganapathi. M. W, Venkoba Rao. A. A study of suicides in Madurai. Journal of Indian medical association, 1966,46, 18-23.
8. I.Sayil. Review of suicide studies in Turkey. Crisis, January 1, 1997; 18(3): 124-7
9. John Rice Minor. The American Journal of Hygiene, Monograph series no2. 1922.
10. K Nadesan. Pattern of suicide: a review of autopsies conducted at the University Hospital, Kuala Lumpur. Malays J Pathol, December 1, 1999; 21(2): 95-9.

11. Platt., Bille-Brahe, U., Kerkhof, A., et al(1992) Para suicide in Europe: the WHO/EURO multicentre study on para suicide.1. Introduction and preliminary analysis for 1989. Acta Psychiatr Scand 85,97-104.
12. B.J. Sadock, V.A. Sadock Ed. The comprehensive textbook of psychiatry 1988.
13. Eddleston M, Sheriff M H R, Hawton K, Deliberate self harm Sri Lanka: an overlooked tragedy in the developing world BMJ 1998; 317:133-135
14. Divisional secretariat, Batticaloa district. 2002.
15. Somasundaram D, Rajadurai S. War and suicide in northern Sri-Lanka. Acta Psychiatr Scand 1995; 91: 1-4
16. T. Ganeswaran, S. Subramaniam, K. Mahadevan. Suicide in a northern town of Sri Lanka. Acta Psychiatr Scand.1984; 69:420-425.
17. Punamaki R, Suleiman R. predictors and effectiveness of coping with political violence among Palestinian children. Br J Social Psychol 1990; 29: 67-77.
18. Dawes A. The effects of political violence on children: a consideration of sout African and related studies. Int J Psychol 1990; 25: 13-31.
19. Hendin H, Haas AP. Suicide and guilt as manifestations of PTSD in Vietnam combat veterans. Am J Psychiatry 1991 May;148(5):586-91
20. Dereck Summerfield, war and mental health: a brief overview. BMJ 2000; 321: 232- 235 (22 July).
21. War trauma in a civilian population, DJ Somasundaram and S Sivayokan. The British Journal of Psychiatry 165: 524-527 (1994)
22. Amir M, Kaplan Z, Efroni R, Kotler M. Suicide risk and coping styles in 76-81. Posttraumatic stress disorder patients. Psychother Psychosom 1999 Mar-Apr; 68(2): 76-81.

Outcome of Pregnancy with Previous Caesarean Sections at T.H. Batticaloa.

Karunakaran KE*, Premananth V[1], Uthayakumar E[1], Goonathilake KTBP[2], Kuhendran P[2], Vinodini T[2].

Abstract

Objectives

To analyze;

1. The rate of vaginal delivery in women with one or two caesarean sections.
2. The influence of the use of oxytocin augmentation in the trial of scar.
3. The mode of delivery in women with two caesarean sections.

Subjects and Methods

A retrospective analysis. Women with previous one or two caesarean sections were enrolled. Period of study was between August 2004 and May 2005.Oxytocin augmentation was used in some women with early onset of labour and clinically average size of foetus.

Outcome measures were;

- Vaginal delivery.
- Incidence and indications of repeat caesarean section
- Scar dehiscence or rupture.

Results

Total number of women in the study was 60.Forty seven were allocated for trial of scar.Twenty nine of them were given oxytocin augmentation; Twenty six (90%) had vaginal delivery, and three had repeat caesarean section(CS).In one case scar dehiscence was found at CS.Of the 18 women who had spontaneous onset of labour,12 (66.6%) had vaginal delivery and 6 had emergency CS. Thirteen women had elective CS. Chief indication of repeat CS was dystocia.Of the three women with past two sections, one had vaginal delivery.

Conclusion

Oxytocin augmentation significantly improves the vaginal delivery rate in women with previous CS and thereby reduces repeat CS rate.

Introduction

Rise in caesarean section has been inevitably increasing for the past few decades. The statistics available from 1987 onwards at this hospital also shows this trend (Table I). Transverse lower segment section has been very commonly employed technique by the clinicians. The resulting uterine scar has also been found to be strong enough to withstand uterine contractions in labour (Chua et al 1996). However there is reluctance in the practice of allowing women with previous CS to vaginal delivery. In this study we retrospectively analyze our experience in the success rate of vaginal delivery, focusing especially on the use of augmentation with syntocinon infusion in women with previous CS scar.

Table I. Rise in rate of caesarean section at T.H.Batticaloa.

Year	*LSCS Rate*
1987	10.5%
1990	12.54%
1995	14.83%
2000	12.3%
2004	15.24%

Source: Hospital labour ward statistics.

Method

The study was undertaken at the ward 3 of Teaching Hospital of Batticaloa (one of the two consultant obstetric units).It was a

* *K.E.Karunakaran, Consultant Obstetrician and Gynecologist Department of Obstetrics and Gynaecology Teaching Hospital Batticaloa ,[1] Senior House Officers, [2] Resident House Officers.*

retrospective analysis .The period of study was between August 2004 and May 2005.

All women with either one or two previous caesarian scar were allocated into the study. No exclusion criteria were affected. Vaginal examination for uterine scar exploration was not performed on those women who delivered vaginally.

Results

Total number of women with previous CS enrolled in this study was 60.Three of them was with two CS and 18 of them had normal vaginal deliveries either before or after CS. All women had lower segment transverse CS previously.

Total number of women delivered vaginally was 38(64.5%) (Table II.).

Labour was augmented in 29 women with syntocinon infusion. (2 IU in the first pint and 4IU into second pint of normal saline); the augmentation was at the time of artificial rupture of membranes in 23 of them and subsequently (within 4-6 hours) in three subjects. Labour in twelve women had progressed well and had spontaneous vaginal delivery. Of the group augmented with syntocinon(29), 26 had vaginal delivery. Three underwent emergency CS. (two for cervical dystocia and one for foetal distress). (Table IV.) One of them had scar dehiscence found at caesarean section (1.7%) and there was no bleeding. Elective caesarean section was performed in 13 pregnant women. Emergency CS was performed in 9. (Table II).

Just over 50 % of the women in the study were in the age group of 20 – 29 years (table III). Half of them had repeat CS. Seventy five percent of the repeat caesarean section performed was done to this age group(16 out of 22 total CS).

Table II. Outcome of labour with previous CS (n=60).

Vaginal Delivery (n =38)-64.5%			*Caesarean Section (n = 22)-36.5%*		
	n	*%*		*n*	*%*
Spontaneous	12	30	Elective	13	60
Augmented	26	70	Emergency	9	40

Table III. Age distribution & mode of delivery.

Age Group(years)	*Vaginal Delivery*	*Caesarean Section*
20-29 (n=32)	16 (50%)	16 (50%)
29-34 (n=18)	14 (77%)	04 (23%)
35 up words (n=10)	08 (80%)	02 (20%)

Table IV. Outcome of trial of scar (n=47)

Augmented with Oxytocin(n=29)			*Spontaneous (n=18)*		
	n	%		n	%
Vaginal delivery	26	90%	Vaginal delivery	12	66.6%
Caesarean section	3	10%	Caesarean section	6	33.3%

Three women in the study had two previous sections. One among them previously had vaginal delivery. She went into spontaneous onset of labour and had vaginal delivery at this pregnancy as well. The other two had CS.

Scar exploration was not performed subsequently on those women who had vaginal delivery.

One case of silent scar dehiscence was noted at CS in a woman whose labour didn't progress despite oxytocin augmentation.

Discussion

The rise in trends of caesarean sections in the Teaching and Maternity hospitals in Sri Lanka is alarmingly high. The annual health bulletin (2000) (Table VI.) shows that these hospitals conduct 33% of the total number of deliveries and just over a quarter of them were delivered by caesarean section.The vaginal delivery rate of 64.5%(Table II) which is found in our study is within the range of reported rate 62.5%-83%.This achievement was possible because of the excellent delivery rate of 90% in women whose labour was augmented with syntocinon (Table IV). In a study conducted at the Colombo North Teaching Hospital (Rudra & Perera 1995) in which oxytocin was used routinely to assess the vaginal delivery rate over the non oxytocin group, the reported rate of vaginal delivery was 62.5% (the non oxytocin group had more (72.5%) vaginal deliveries) . The scar dehiscence in this group was notably high (3.75%). From these observations we can conclude that oxytocin augmentation should be used judiciously, in cases with favourable Modified Bishop's score and preferably at the onset of labour.

Our observations also reveal that previous vaginal delivery is a favourable predictive factor for successful vaginal delivery after CS. As for maternal age, older women tend to deliver vaginally and higher incidence of repeat CS can be noted in younger women, (Table III). Therefore maternal age of 30 years and over appears to have favourable predictive value.

It is evident that in our study, elective repeat caesarean section was done for cervical dystocia in four cases (7%) (TableV.).Two of them were for breech presentation and the other two with cephalic presentation. The significant proportion of the women (85%) developed spontaneous onset of labour. Therefore we conclude that provided the foetal bio physical parameters are within normal range, we should wait for the spontaneous onset of labour and thus Bishop's score is another predictive factor in the management of pregnant women with past CS.

Exploring the uterine scar after vaginal delivery doesn't seem to be of value since the integrity of the lower segment scar is time tested. Further there is a tendency to cause damage to the scar during examination.

In this study we also report the successful vaginal delivery in a woman with two previous sections. This 32 year old woman previously had two CS for foetal distress in first stage of labour, had a normal vaginal delivery subsequently in 2002 at our unit. She again presented to us in her fourth pregnancy which also had spontaneous onset of labour and ended up in uncomplicated vaginal delivery. In both instances labour was monitored carefully. She subsequently consented for sterilization.

Vaginal delivery after two CS has been reported by several workers. In a study on planned vaginal delivery after two previous caesarean sections (Chattopadhyay et al 1994), 103 (89%) women had delivered vaginally.Some of them had oxytocin augmentation and prostaglandin induction also. Therefore vaginal delivery should be attempted in women with two previous CS.

Table V. Indications for repeat LSCS (n=22.)

Indication	*Elective*	*Emergency*
Dystocia 1.Cervical 2.Foeto-pelvic	 4 2	 4 1
GDM/PIH	3	-
Mal presentation	1	-
Abruptio placentae	-	1
Placenta praevia	1	-
Foetal distress	-	3
Bad obstetric history (pervious still births or neonatal deaths)	2	-

Table VI.Maternity services by type of hospital, 2000.

Type of Institution	*Total Deliveries*	*Multiple Deliveries*	*Forceps Deliveries*	*Caesarian Section*	
				Number	*Rate*
Teaching Hospitals	62,065	647	1,606	15,533	25.0
Maternity Hospitals	41,220	378	770	11,179	27.1
Provincial hospitals	48,213	549	450	10,373	21.5
Base Hospitals	90,876	766	1,832	11,361	12.5
District Hospitals	51,189	213	64	117	0.2
Peripheral Units	12,863	84	41	200	1.6
Rural Hospitals	7,320	15	-	-	-
Maternity Homes	2,163	9	-	-	-
Sri Lanka	315,909	2,661	4,763	48,763	15.4

Source: Annual health bulletin 2000.

Our study although small, reveals some vital form of steps towards the reduction of repeat caesarean section. We recommend the use of oxytocin augmentation at the onset of spontaneous labour with previous one or even two lower segment caesarean sections, in order to increase the chances of vaginal delivery and thereby limit the rise in the rate of CS especially due to dystocia (table V), which accounts for 50% of all CS.

References

1. Annual Health Bulletin,2000. Department of health services Sri Lanka. p33.

2. Chattopadhyay SK, Sherbeeni MM, Anukote CC,1994. Planned vaginal delivery after two previous caesarean sections. Br. J. Obstet. Gynaecol. 101: 498-500

3.Chua S, Arulkumaran S, Haththotuwa R. 1996. Management of women with previous caesarean section scar. In; Arulkumaran S, Ratnam SS, Bhasker Rao K eds, The management of Labour. Orient Longman. Pp 317-327

4.Rudra T, Perera WSE,1995. Influence of oxytocin on the outcome of previous caesarean section scar. Paper presented at the 28th annual scientific sessions of the Sri Lanka College of Obstetricians and Gynaecologists. September 1995. Abstract book p 12.

Paediatric malarial cases in the district of Batticaloa: Is it on the rise?

N. Suresh*

Abstract

Malaria is a common condition in Sri Lanka where both the *Plasmodium vivax* and *P. falciparum* infections are present. For the past two decades, northern and eastern Sri Lanka has been affected by armed ethnic conflict. This has had a heavy impact on displacement of civilians, health delivery services, number of health professionals in the area and infrastructure. The north and the east of Sri Lanka have a severe malaria burden, with less than 5% of the national population suffering 34% of reported cases. [2] A study was done to determine the number of malarial cases admitted to one Paediatric unit in the Teaching Hospital, Batticaloa from 01.2003 to 03.2004. The study was a descriptive cross sectional study. Data was collected by recording the number of confirmed malarial cases (by microscopy and as well as clinically) in one Paediatric unit during this period. Cases reported from the Government-controlled areas as well as the uncleared areas were taken into account. The number of cases reported to this unit was 275. Out of this total, 235 (85%) cases were from uncleared areas of the district. There were 44 cases (16%) cases of *P. falciparum* infections. Many patients come with recurrent attacks of the disease and due to severe blood loss, have to undergo transfusion of blood. These are reports from a single unit in the hospital. There are similar admissions to the other Paediatric unit as well as 2 medical units. So the number of cases of malaria is much more than our findings. The World Health Organization has not claimed that it is a malaria-endemic area and these results must be brought to their notice. The malaria maps of Sri Lanka compiled by Briet *et al* also do not include Batticaloa as a heavily affected area.[2] A comprehensive study must be carried out to determine the prevalence of the disease in Batticaloa as well as the Eastern Province. Since the majority of the cases are reported from the areas not under control by the government, it is questionable whether the preventive measures reach the populations in these areas and this has to be taken into consideration during planning and implementation of the control programmes.

Introduction

Malaria is a common disease in the tropical countries and the burden of malaria in these areas today is estimated to involve 300–500 million episodes of acute illness and more than one million deaths per year. [1] Sri Lanka is also burdened with the malarial infections; both of *Plasmodium vivax* and *P. falciparum*. Despite a relatively good national case reporting system in Sri Lanka, the security situation in the northern and the eastern provinces prevent the transfer of information to the relevant authorities. The north and the east of Sri Lanka have a severe malaria burden, with less than 5% of the national population suffering 34% of reported cases. [2] The main vector is *Anopheles culicifacies*, which breeds mainly in

*Senior house officer, Paediatric Unit I, Teaching Hospital, Batticaloa

pools in stagnant rivers, and therefore, its density is mostly dependent on temporal and spatial variations in rainfall and river flow. *A. culicifacies* also breeds in abandoned gem mining pits and agricultural wells. Vectors of less importance are *A. annularis*, *A. subpictus*, *A. tessellatus* and *A. vagus*.[3] The present study was done with the following objectives;

1. to determine the number of paediatric cases of malaria treated at the Ward 27, Teaching Hospital, Batticaloa

2. to determine the number of *P. vivax* and *P. falciparum* cases

3. to determine whether there was a difference in the admissions from the government-controlled areas and the uncleared areas

Materials and methods

The present study was a descriptive cross sectional study. Data was collected by recording the number of confirmed malarial cases in Ward 27, Teaching Hospital, Batticaloa from January 2003 to March 2004. This was achieved by investigating the clinical symptoms and also by microscopy. The Ward Register, Bed Head Tickets and the blood reports were examined. Taking the divisional secretariats into account, the cases were sorted out as whether the patients were from the government-controlled areas or from the uncleared areas of the district.

Results

The number of cases reported to this unit was 275 during this period. Out of this total, 235 (85%) cases were from uncleared areas of the district whereas only 40 cases were reported from the government-controlled areas (Table 1). As shown in Table 2, the majority of cases (228) were *P. vivax* infections (83%). There were 44 cases (16%) cases of *P. falciparum* infections. Three cases of mixed infections were identified. There were re-admissions of the same patients due to recurrent attacks of the disease. Severe blood loss was a feature of the patients with *P. falciparum* infections and they had to be given blood transfusions.

Discussion and conclusions

Recurrent malarial infections in childhood could precipitate malnutrition

Table 1

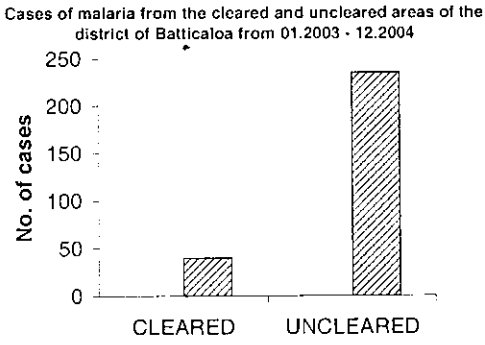
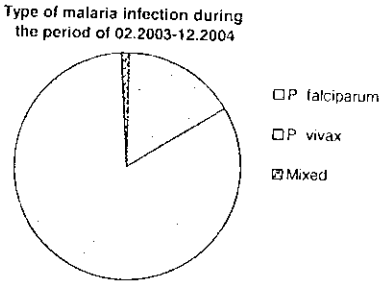


Table 2



conditions in children. At the same time, whether it affects their mental and physical development is also questionable. The situation is graver when we consider that these are reports from a single unit in the hospital. There are similar admissions to the other Paediatric unit as well as 2 medical units. So the actual number of total as well as paediatric cases of malaria is much more than our findings.

The increased incidence could be due to several reasons. The patients do not follow the complete course of anti-malarial treatment and therefore get recurrent attacks. As reported by Reilley for the Northern Province, it could be due to improper self medication as well.[3] The Anti Malaria Campaign; with the assistance of Non- Governmental organizations, conducts educational programmes and clinics, provides anti-malarial drugs and at the same carries out vector control measures. Despite all these efforts the prevalence of malaria has increased and clearly the majority of the cases are from the uncleared areas of the district. The World Health Organization has not claimed that it is a malaria-endemic area and these results must be brought to their notice. The malaria maps of Sri Lanka compiled by Briet *et al* also do not include Batticaloa as a heavily affected area.[2] A comprehensive study must be carried out to determine the prevalence of the disease in Batticaloa as well as the Eastern Province. Since the majority of the cases are reported from the areas not under control by the government, it is questionable whether the preventive measures reach the populations in these areas and this has to be taken into consideration during planning and implementation of the control programmes.

The author wish to thank all the people who assisted in carrying out this study

References

1 Fernando SD, Gunawardene DM, Bandara MRSS, De Silva D, Carter R, Mendis KN and Wickramasinghe. The impact of repeated malaria attacks on the school performance of children. *American Journal of Tropical Medicine and Hygiene,* 69(6), 2003, pp. 582-588

2 Reilley B, Abeyasinghe R, Pakianathar MV. Barriers to prompt and effective treatment of malaria in northern Sri Lanka. *Medecins sans Frontieres*, Colombo, Sri Lanka.

3 Olivier JT Briët, Dissanayake M Gunawardena, Wim van der Hoek, and Felix P Amerasinghe[1] Sri Lanka malaria maps .*Malaria Journal*. 2003; 2: 22.

Fertility and family planning in Batticaloa

W.Williams *

Crude birth rate

Batticaloa has one of the highest Birth Rates in Sri Lanka.

	1960	1966	1971	1978	1981	2001
Sri Lanka	36.6	32.3	30.4	28.5	28.0	18.0
Batticaloa	49.5	43.5	39.6	38.7	39.0	23.5

However the Crude Birth Rate (Births per 1000 population) is a poor indicator of changes in fertility. It is deperdent on the number of women in the fertile age group (15 – 49) the proportion of women currently married, the proportion of women using contraception and the duration of post – partum amenorrhoea.

Age distribution of women

The age distribution of the Married Women of Reproductive Age (MWRA) in Batticaloa is more favouable for child-bearing, as there are more women in the younger age groups. In Batticaloa the MWRA in their twenties exceeds the number in their thirties, by 20%. In Sri Lanka, there are more women in their thirties than in their twenties.

Age at marriage

The concentration of married women and births among younger age groups is partly due to the younger age at marriage.

Mean Singulate Age at Marriage

	1963	1971	2000
Batticaloa	18.2	20.1	22.4
Sri Lanka	21.3	23.1	25.5

Early marriage results in larger proportions of women in younger age groups being married.

Causes of decline in fertility in Sri Lanka

The decline in fertility in Sri Lanka has been attributed to 4 factors:

- ★ Increase in mean age at marriage of women
- ★ Decline in the proportion of currently married women in early childbearing age groups
- ★ Changes in proportions married in the different age groups
- ★ Decline in Marital Fertility (due to use of contraception)

In Batticaloa the above factors had little impact on fertility due to minimal changes in them over the years.

**Medical Officer, MCH, Batticaloa.*

Age specific fertility rates (ASFR)

ASFR is computed by dividing the total number of births occurring to the women (married and single) in each age group starting from 15 – 19

	Sri Lanka			Batticaloa		
	1963	1971	2000	1963	1971	2000
15 - 24	52	39	27	193	118	43
25 – 29	227	184	83	330	254	102
30 – 34	239	199	98	271	210	129
35 – 39	157	131	40	150	127	79
40 – 44	46	39	08	36	32	20
45 – 49	6.6	5.6	01	5	5	3
TFR	5.0	4.2	1.9	6.5	5.7	2.5

The ASFR in all age Groups has dramatically declined in Batticaloa and in the rest of Sri Lanka. But the ASFR in the age groups 35 – 49 in Batticaloa is twice that for the rest of Sri Lanka (may be due to poor access to sterilization)

Total Fertility Rates (TFR)

TFR is a summary measure of current fertility which could be interpreted as the average number of births a women would have if she experienced the same ASFR as all other women.

TFR by District – NEP (cleared areas) – 2001

Jaffna	Mannar	Vavuniya	Batticaloa	Ampara	NEP	SL
3.0	2.8	2.6	2.5	2.2	2.6	1.9

Effect of conflict on fertility

The prolonged conflict has resulted in a "marriage squeeze". if women are expected to marry men older than themselves there can be more women in a cohort than the men they are eligible to marry in say a cohort five years older than themselves. This would give rise to a surplus of marriageable females in relation to marriageable males. The war has decimated the male population. In addition more males than females have emigrated. Others have been disabled due to injuries.

The lowest number of births was in the time of the occupation of the district by the Indian peace keeping force.

War affects the pattern of age at marriage for both males and females.

Contraception

Contraceptive Prevalence (Modern Methods) Batticaloa and Sri Lanka – 1982 and 2002

(% Currently married women – age 15 – 49 – using a method)

	INJ.	PILL	IUD	COND	STER	TOTAL
Batticaloa 1982	2.3	1.2	0.1	0.4	13.0	17.0
2002	11.5	6.1	0.6	0.9	6.7	25.8
Sri Lanka 1982	1.4	2.6	2.5	3.2	20.7	30.4
2000	10.8	6.7	5.1	3.7	23.1	49.5

Although, poor access to family planning has been said to be due to the conflict, it is evident from the above, that acceptance of family planning has been low even before the conflict in Batticaloa.

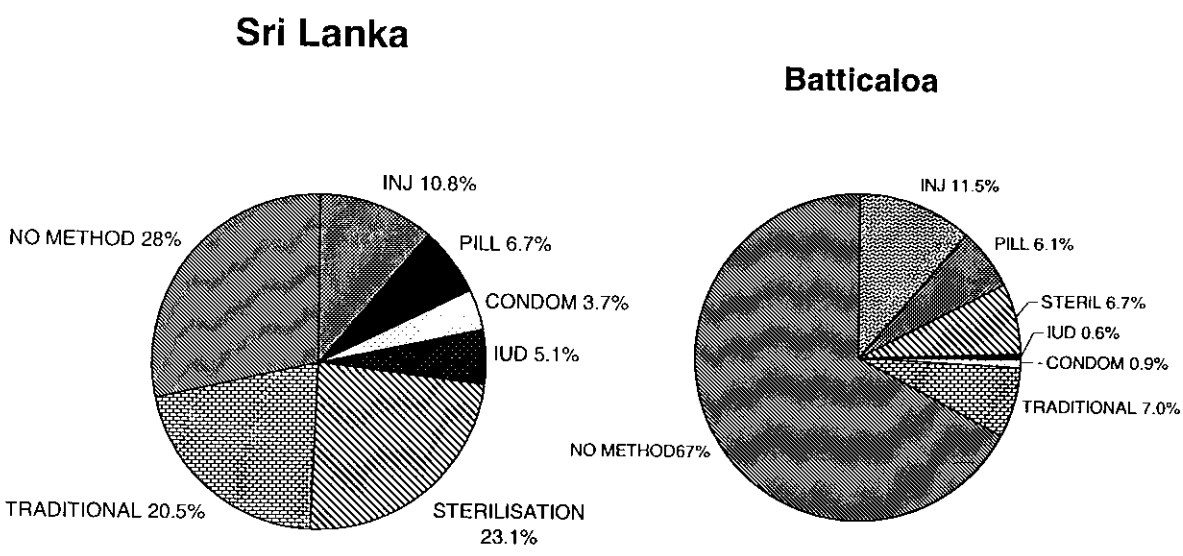
The contraceptive prevalence Rate for any method in the North East Province is 36% compared to 70% for the rest of Sri Lanka (Demographic and health surveys – 2000/2001)

However the poor accessibility to contraceptive services especially sterilization resulted in a large unmet need for contraception, and increased number of births. Sri Lanka's target of attaining replacement level fertility (TRF of 2.1 children per women) by the year 2000 has been reached.

But in the North East the TFR will not decrease, as postponed marriages will take place, in increasing numbers following peace, and access to contraception is still limited.

CONTRACEPTIVE PREVALENCE RATE

(% of MWRA by method used)



Percent currently married women using contraception NEP (cleared areas only) and Rest of Sri Lanka.

	NEP	Sri Lanka
Pill	3.8	6.7
IUD	1.0	5.1
Injection	10.1	10.8
Condom	0.6	3.7
LRT	13.0	21.0
Vasectomy	0.5	2.1
Any modern method	29.0	49.5
Trad. method	7.2	20.5
Safe period	5.3	11.9
Withdrawal	1.0	7.1
other	0.1	0.4
Prolonged Abstinence	0.8	1.4
Any Method (Total)	36.2	70.0

(Source : DHS – 2000, DHS (NEP) – 2001)

BATTICALOA DISTRICT
CURRENT USERS OF CONTRACEPTION – BY MOH AREA
AMONG CURRENTLY MARRIED WOMEN – 2003

MOH/Method	INJ	Pill	IUD	Cond	Sterili	Total
Batticaloa	10	3.5	1.5	0.4	11.2	27
Kalu'kudy	3.5	1.5	-	0.1	3.2	8.2
Valaichenai	12	1.7	0.6	3.9	16.0	34
Chengaladi	18	3.2	0.2	0	5.5	27
Kattankudy	26	12.8	0.1	1.7	1.3	43
Vakarai	2.2	8.8	0.1	1.9	0.5	14
Vavunativu	14	2.7	3.0	0.9	5.0	25
Eravur	21.0	3.0	0.03	0.2	1.2	25
Paddipallai	19.6	1.3	0.1	0.2	1.3	23
Vellavelly	2.6	1.2	0.1	0.2	1.4	05
Total	11.5	6.1	0.6	0.9	6.7	25.8
NEP	10.1	3.8	1.0	0.6	13.6	29.0

(Current users – percent of currently married women 15 – 49 – using method)

CURRENT USERS IN NEP – 2001 COMPARED WITH OTHER PROVINCES – 2000

	MODERN				
	Temporary	Sterilised	Total	Traditional	All
NEP – Urban	13.2	7.7	20.9	4.9	25.8
- Rural	15.8	14.5	30.3	7.7	38.0
Other Provinces	26.4	23.1	49.5	20.5	70.0
Urban	25.4	16.8	42.2	23.3	65.5
Rural	27.6	23.2	50.8	21.2	72.0

Unmet need for contraception

Only 29% of women are using a modern method in N.E.P, compared to 49% in the rest of Sri Lanka. In Batticaloa, of the total MWRA, 18% say that though not using a method they wish to use a method to limit or space pregnancies. 12,500 women or one in every five in Batticaloa wants to avoid pregnancy but is not using contraception.

18% of currently married women are in need of family planning services. Out of this 12% do not want any more children and 6 % want to postpone the next pregnancy.

What can be done?

Since the need is mostly for limitation of family size, sterilization is the method of choice.

However, due to various reasons, access to sterilization at the age when women want it is limited.

Hence the IUD is the ideal method. With the Copper T providing 10 years of protection, it should be available in all MOH areas, and women should be motivated to accept it through quality services and effective counseling services.

References

1. Dept. of census and Statistics, 1995. Demographic and Health Survey 1993
2. Dept. of census and Statistics, 2001. Demographic and Health Survey. DHS, 2000
3. Dept. of census and Statistics, 2002. Demographic and Health Survey 2001
4. W.I. De Silva (1997). Trends in Marriage Timing in Sri Lanka. Asia – Pacific Population Vol. 12, No. 2, pp. 3-22
5. Family Health Statistics- DPDHS Batticaloa 2001 - 2003

Intrapartum Analgesia – Tramadol VS Pethidine

Rudra T[1], Kamalini K[2], Thirumal S[3]

Abstract

Objective:
To assess the effectiveness of Tramadol compared to Pethidine as an analgesic in labour

Setting:
Obstetrics and Gynaecology unit of Teaching Hospital Batticaloa.

Design:
Prospective, Randomised Double Blind Study.

Methodology:
One hundred and ninety-nine patients admitted to labour suit were randomly allocated into two groups. There were given Pethidine or Tramadol. Partogram was maintained and protocol for the study was formulated and followed, many parameters were used for the analysis and statistically analysed.

Results:
Age and POA were comparable in both groups. Intensity of pain prior to administration of the Pethidine (Nil-9%, Mild-35%, Moderate-49%, Severe-6%) and Tramadol (Nil-8%, Mild_40%, Moderate- 45%, Severe-7%) were comparable. Tramadol (Nil-9%, Mild-40%, Moderate-45%, Severe-6%) and group expressed more intense pain than Pethidine (Nil-33%, Mild-39%, Moderate-25%, Severe-2%) group after giving the drugs. There is no significant difference in the mode of delivery in both. The one minute Apgar is low in Pethidine than Tramadol but it was non significant. Also the ten minute Apgar did not reveal any significant difference.

Conclusion
Pethidine can not be replaced by Tramadol for obstetric analgesia.

Introduction

Pregnancy and labour are normal physiological conditions in women's lifecycle during which she experiences the most excruciating pain in her life. Managing pain is one of the vital components in the management of labour.

The preparation of a woman for labour starts during her antenatal period. There are various ways to control the pain during labour which includes psychological support, TENS, Entonox, Epidural, parental analgesics like Pethidine and Tramadol. But due to inadequate materials and staff most of the labour suits in Sri Lanka mothers are given parental analgesics or none. The Pethidine has its own disadvantage of sedation and respiratory depression in the mother and the neonates. Because of these adverse effects there is a place for an alternative analgesic for Pethidine. We hypothesised that the Tramadol may provide a better analgesia without some of the adverse effects of Pethidine.

Therefore a study was conducted in the labour suit of TH Batticaloa to compare the maternal and foetal outcome in using Tramadol and Pethidine.

Method

The aim of the study was to compare the pain relief, foetal and maternal outcome when using Pethidine and Tramadol. It was a randomized double blind study. After obtaining the ethical clearance the study was conducted in the labour suit of

[1]T Rudra Consultant obstetrician and gynaecologist, [2&3] Resident house officers
Department of Obstetrics and Gynaecology Teaching Hospital Batticaloa.

Teaching Hospital Batticaloa for a period of six months from may 2002.

A questionnaire was formulated which had basic parameters Age, parity, period of amenorrhoea, birth weight of the babies and the onset of labour and specific parameters tested were pain before and after administration of drug, cervical dilatation, duration of first and second stages, and mode of delivery apgar at 1 and 10 minutes. View of caring staff and the maternal perception were included. All the mothers who were admitted to the labour ward and consented were included in the study.
The exclusion criteria for the study are malpresentation, intrauterine death, advanced labour (Cervix more than 5cm), any form of foetal distress, medical complication and non compliant mothers.

Pain was analysed in four scores. Eligible mothers who are admitted to the labour suit included in the study. They were explained about the study, pain scale and the outputs expected from them. The questionnaire was filled. Pethidine 75mg was given intramuscularly to the control group and Tramadol 50mg given intramuscularly to the study group intramuscularly by one of the medical officers. Along with the partogram the questionnaire was completed by another set of staff.

The database created & statistical analysis was (Chi-Square test) done.

Results

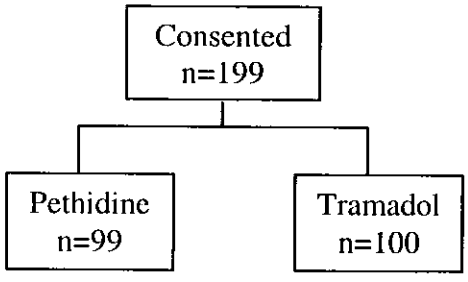


Diagram of study population

One hundred and ninety-nine mothers who had given consent were included in the study. They were randomly selected either to received Pethidine or Tramadol.

Table 1
Age distribution among the Pethidine and Tramadol group

Age	*Pethidine*	*Tramadol*
<20	16	8
20-25	33	34
26-30	31	28
31-35	14	22
36-40	5	8

Table 2
Parity vs. Pethidine and Ttramdol

Parity	*Pethidine*	**Tramadol**
1	67	47
1-4	27	44
5&>	5	9

Basic parameters
The distribution in age and the parity are same in both groups.

The weights of babies did not differ significantly in test and control samples.
Table 3
Weight of the babies in control and test populations

Weight of baby(Kg)	*Pethidine*	*Tramadol*
<2	2	1
2-3	56	60
3.1-4	39	39
>4	2	

Specific parameters
The average time taken for the first stage of labour in control group is 281.81 minutes and 199.2 minutes in the test group. The p value of this observation is 0.0058 which is not a statistically significant difference (Table4).

Second stage is shorter in Tramadol group than Pethidine group which is also not differing significantly.

Table 4
Duration of first stage and analgesic

Duration (Minutes)	Pethidine	Tramadol
<120	14	30
120-240	33	44
241-360	22	12
361-480	19	10
481-600	6	2
>600	5	2

Table 5
Duration of second stage and analgesic

Duration (Minutes)	Pethidine	Tramadol
<30	31	50
30-60	49	44
61-90	11	4
91-120	8	2

Significance number of patient with Pethidine had labour their labour augmented or induced.

Table 6
Distribution in onset of labour

Labour	Pethidine	Tramadol
Induced	45	33
Spontaneous	32	59
Augmented	22	8

Table 7
Pre analgesic pain perception

Pre drug pain	Pethidine	Tramadol
Nil	9	8
Mild	35	40
Moderate	49	45
Severe	6	7

Nine mother of the Pethidine group had no pain prior to commencement of labour in contrast to eight who subsequently needed Tramadol

Table 8
Post analgesic pain perception

1 Hour after Drug	Pethidine	Tramadol
Nil	33	9
Mild	39	40
Moderate	25	45
Severe	2	6

Also an observation made one hour after admisnitration of analgesic (Table 8). Thirty three of them in the control and nine in test groups were pain free. The values observed are significantly differing.

The average rate taken for cervical dilatation with Tramadol (2.30cm/hour) is longer than the pethindine (3.24 cm/hour) with p value of 0.02 which is a non significant different.

Table 9
Effect of the agents on the rate of cervical dilatation

Rate of cervical Dilatation	Pethidine	Tramadol
<1	17	11
1	41	30
2-5	36	45
6-10	5	14

The route of delivery was not influenced by the drug (Table 10)

First minute Apgar was more than seven in 82% of the babies of mothers who had Pethidine and 68.69% babies of mothers who recieved Tramadol (Table 11a). Though it appears Tramadol is better on the neonate the observed values are significantly varies.

Similarly ten minute Apgar also did not differ in both groups (Table 11b).

Table 10
Mode of delivery and analgesic

Mode of delivery	*Pethidine*	*Tramadol*
Normal vaginial	88	85
Vacuum	5	6
Forceps	0	1
LSCS	6	8

Neonatal outcome and the drugs
Table 11a

Apgar at 1 minute	*Pethidine*	*Tramadol*
1-3	1	2
4-7	30	16
>7	68	82

Table 11b

Apgar at 10 minute	*Pethidine*	*Tramadol*
1-3	0	0
4-7	2	4
>7	97	96

Table below indicates that the patient's were satisfied with Tramadol than the Pethidine .

Table 12
Patients view about Pethidine & Tramadol

Patient View	*Pethidine*	*Tramadol*
Never ask	44	30
Recommend	7	15
Satisfied	48	55

Discussion
Need of pain relief during labour is more frequently demanded by pregnant women in the modern era. Such demand is more frequently made in western world than in developing countries like us. This has led to many women were terrified of normal delivery and requesting of caesarean section to overcome the agony of labour.

Tramadol is cyclohexanal derivative with μ agonist activity, weak opioid analgesic potency comparable to that of Pethidine. It only acts on the opioid (μ) receptors. but also inhibit serotonin (5 hydroxy tryptogan; 5HT), and noradrenaline reuptake.

Pethidine is a strong opioid analgesic and act on μ receptor. It may also inhibit the reuptake of noradrenaline, adrenaline into the presynaptic neuron which is responsible for some additional effects.This too has some atropinic (anti muscarinac) properties. When we consider Pethidine has higher sedative effect than Tramadol. Common side effect of pethidine are nausea, vomiting and respiratory depression which is lesser with tramadol. Addiction and abuse rate minimal in Tramadol than Pethidine.

Few studies have been performed comparing Pethidine and Tramadol with limited numbers. In some of them Tramadol was infused as a patient control analgesic. But in our study we used intra muscular Pethidine and Tramadol.

Comparing most of the literatures, number of patients recruited in our study are higher. Most of studies used 75 - 100mg Tramadol, but we used only 50mg Tramadol.Similarly pethidine used in our study was lower.

Basic parameters such as age, parity, birth weight were comparable in study and control groups. Hence the results of specific parameters can be matched. Like other studies we compared maternal and neonatal outcome measures.

Pethidine group had cervical dilatation rate of 3.24 cm/hour and in contrast to Tramadol group had the cervical dilatation rate of 2.30cm/hour. But this is statistically insignificant. Duration of labour did not differ in both groups similar result was obtained in other studies as well (Kainz et al.) Like other studies route of delivery did not vary between two groups.

We found that a better analgesic effect was obtained with Pethidine than

Tramadol but a study by Viegas et al. showed no difference between Pethidine and Tramadol. Pain score in control and test groups were same.

More neonates of mothers who received Tramadol were non-asphyxiated in contrast to Pethidine. Hence resuscitation is more frequency needed for babies who were exposed to Pethidine. The results were conflicting to some of studies which are done earlier (Keskin et al., Kainz et al., Fieni et al.)

Patient view was only analysed in few studies. It is surprising more patients were rejecting Pethidine which may be due to adverse effects. More patients who had Tramadol preferred to have it next time.

Our study did not analyse features such as foetal heart rate pattern, umbilical cord blood pH, serum level of Tramadol in umbilical cord and maternal blood samples due to lack of facilities. We may need a larger multi centre study to obtain better results.

Conclusion

For many decades pathidine has been used as an obstetric analgesic it cannot be replaced by any drugs such as Tramadol. We still recommend epidural and other analgesic than pethidine and Tramadol for better pain relief in labour and reduce the frequency of night mares of labouring women.

Acknowledgements

We would like to thank the medical offices who actively involved in the study Dr A Meenachisundar, Dr K Theivendrakumar, Dr M Ruthashan, Dr P Sarvananthay, Dr K Vithyashangar and Dr A Akila. Also we express gratitude to the staff of labour room for their excellent co-operation. Finally we thank the patient who gave consent to participate in the study.

Reference

1.Keskin HL, Keskin EA, Avsar AF, Tabuk M, Caglar GS. Pethidine versus Tramadol for pain relief during labor. Int J Gynaecol Obstet. 2003 Jul;82(1):11-6.

2.Fieni S, Angeri F, Kaihura CT, Ricci L, Bedocchi L, Galanti B, Rossi T, Benassi G, Benassi L. Evaluation of the peripartum effects of 2 analgesics: meperidine and Tramadol, used in labor. Acta Biomed Ateneo Parmense. 2000;71 Suppl 1:397-400.

3.Radbruch L, Grond S, Lehmann KA. A risk- benefit assessment of Tramadol in the management of pain. Drug Saf. 1996. Jul;15(1):8-29

4.Viegas OA, Khaw B, Ratnam SS. Tramadol in labour pain in primiparous patients. A prospective comparative clinical trial. Eur J Obstet Gynecol Reprod Biol. 1993 May;49(3):131-5.

5.Kainz C, Joura E, Obwegeser R, Plockinger B, Gruber W. Effectiveness and tolerance of Tramadol with or without an antiemetic and Pethidine in obstetric analgesia. Geburtshilfe Perinatol. 1992 Mar-Apr;196(2):78-82.

Vaginal birth after caesarean section Its success and failure

Karunakaran K.E.*

Caesarean section (CS) delivery has become an inevitable option in modern obstetric practice. The advancement of safety in this procedure has led to an unprecedented increase in the rate of CS, i.e. 6% of all births in 80s rises to over 20% in late 90s(Watson & Boves 1999). Mode of delivery after caesarean section is still holding a debating point. Several workers have been attempting to formulate a system to select women who could be allowed a trial of labour (or Trial of scar). This article looks into the aspects of the influence of past caesarean section, on subsequent obstetric performance.

Historical Background of Caesarean Section

The origin of the operation and the term caesarean section are uncertain, but are of great antiquity. Traditional Roman Law in the seventh century BC ordered that the procedure to be performed upon woman dying in the later few weeks of pregnancy in the hope of saving the child. The law "Lex regia", later became known as Lex Caessarea under the emperors, and hence the name. There were also reports that the operation was performed on the living about 140 B.C and that Emperor Julius Caeser was born in this manner and hence the name "Caesarean section". There were also references that the Latin verb 'caedere' – to cut and the verb 'seco' also means 'cut' were the origin of the name. All of these references are legends and it is pertinent that no such operations on the living were mentioned by Hippocrates and other writers. Even Soranus who in 2nd century AD covered all aspects of obstetrics didn't have mention of this procedure.

The procedure of abdominal delivery was almost always fatal, due to sepsis & bleeding. Various techniques were designed; Porrus (1876) performed subtotal hysterectomy during caesarean delivery to prevent death due to bleeding. It was only in 1882 when Max Singer advocated the suturing of uterus after delivery. Silver wire was used for suturing. This was the major step towards reducing maternal death from haemorrhage. The extra peritoneal approach was introduced in 1907 but didn't gain popularity. Trans peritoneal lower segment caesarean section was advocated by Kroing (1912) and later modified by Munro Kerr (1926) as a transverse lower segment incision, that proved much safer procedure and has been universally accepted since then.

The subsequent development of antibiotics, antiseptic and sterilization techniques, safe anesthesia & blood transfusion have made the CS, a much safer procedure. The operation which was primarily done for severe contraction of pelvis was also performed for many maternal indications. With the development of modern technology in lobour wards and neonatal units such as electronic foetal monitoring, neonatal ventilation etc., there was a further rise in caesarean section deliveries, even to include very low birth weight (VLBW) babies, to prevent 'possible intra cranial trauma'. Further there have been social, ethical & medico legal factors which have been added to the list of indications leading to the alarmingly high rate of CS all over the world.

Steadying Caesarean Section Rate

Attempts are being made by obstetricians and obstetric centers to steady and reduce the caesarean section rate. Professional bodies showed concern and appointed special

*K.E.Karunakaran, Consultant Obstetrician and Gynecologist
Department of Obstetrics and Gynaecology Teaching Hospital Batticaloa.

committees to enquire into this aspect and suggested suitable measures to control this rate.

A survey performed in Scotland (Wilkinson et al) on the indications for caesarean section suggested that there would be scope to increase the vaginal delivery rate. It stated that before this can be attempted, agreement must be reached by clinicians about effective management of particular problems. The survey also stated that women also need to have ready access to 'evidenced based information' about CS.

In another survey Leitch & Walker reported that the overall increase of CS rate from 6-8% in 1962 to 18.1% in 1992 was possibly due to a lowering in threshold of the obstetricians and the women in their care,on the decision to carry out a CS, rather than considering the changes in obstetric management.

In analyzing the major indications for CS, repeat CS is leading the others such as dystocia, major degrees of placenta praevia, breech presentation & foetal causes.(Table I).In selected South Asian Teaching Institutions the repeat CS rates were high ranging from 18-40% of all CS, (Rao – 1996).

Therefore attention should be made on the management of women with previous CS in order to reduce the CS rate.

Management of Women with Previous CS Scar

In 1918 Craigin introduced the concept of "once a CS, always CS", when referring to classical CS. However for the past 3 decades or more, obstetricians in Sri Lanka have been performing transverse lower segment caesarean sections, like the practice in many other countries. The integrity of the lower segment scar has been studied extensively. Many series showed that, the vaginal delivery has been associated with less maternal morbidity & mortality than with repeat CS and the loss of integrity of lower segment scar has been as low as 0.3-1.7% & occurred as frequently in woman without labour as in those allowed a trial of labour. These series also showed that the rupture of lower segment scar does not carry additional foetal risk if managed properly. (Chua et al 1996).

It has also been shown that scar does not influence significantly in the uterine activity in labour, even with the use of oxytocin augmentation. Recent observations by Rudra & Perera (1995) however showed that use of oxytocin routinely has been associated with more scar rupture (3.75%) and more repeat CS rate (37.5%) compared to non oxytocin group (1.25% and 27.5% respectively). However in other studies (Arulkumaran et al; 1989) where syntocinon augmentation was employed on those trials of labour, which did not progress, showed 78% delivered vaginally. In another study, the same team of workers showed that scar rupture could occur with prolong

Indications	*USA*		*Women's Hospital(Madras)*	
	1980	*1990*	*1970*	*1992*
Repeat caesarean	31.9%	37.5%	19.2%	33.4%
Dystocia	28.4%	30%	23.4%	19.4%
Foetal distress	4.7%	9.7%	10.7%	22.3%
Malpresentation(breech)	11.8%	8.5%	12.3%	8.4%
Others	22.5%	13.5%	34.4%	16.5%

Table I. Indications for caesarean section; source Rao 1996

oxytocin use (over 6 hours) despite poor progress.Our observation at General Hospital, Batticaloa (published in this book,pp44-47) showed 90% vaginal delivery with oxytocin augmentation and one scar dehiscence among the 29 women, included in the study.

Although trial of labour with more than one previous lower segment CS, still remains controversial, there was evidence that such trial in carefully selected women, led to uncomplicated vaginal delivery. In one such study (Chattopadhyay et al 1994) 103 women (89%) out of 115 with 2 CS delivered vaginally. Prostaglandin was used for induction in 37(32%) women & oxytocin augmentation was employed in 32(28%).One scar dehiscence (0.8%) was detected. Vaginal delivery after 2 CS too was reported from Jaffna, and in Batticaloa as well. Therefore trial of labour in women with two previous CS appears to be a good option.

It was once thought that development of post operative wound infection may lead to weakened scar. Studies however showed that there was complete myometrial regeneration and a 'tougher' scar in the case of previous puerperal infection. Uterine rupture and dehiscence was not significantly high in this group of women when given vaginal birth.

Considerations have also been made on the necessity of exploration of the CS scar, after vaginal delivery. Such exploration should be done carefully as the examination too may cause rupture of the scar. Further, many workers including us are of the view that this practice is not necessary. Therefore it is pertinent that vaginal delivery after CS should be an inevitable option.

It is also essential that concerns of the clinicians in various aspects of vaginal delivery, such as integrity of scar, selection of women for vaginal delivery, & medico legal implications should be addressed and therefore clear consensus could be reached, in the practice of allowing women with previous CS for vaginal delivery. Following discussion will shed light.

Gathering information in Sri Lanka & abroad show that the uterus with lower segment scar could behave as the unscarred uterus with regard to labour.Table II shows that in a few studies done in Sri Lanka the rate of vaginal delivery is in the range of 60-72.5%.In an attempt of formulating a 'predictive score system for patients undergoing trial of scar', Panadare & Amarasinghe (1998) found that four variables ie, Maternal Age, Prior Vaginal Delivery, Estimated Birth Weight & Dilatation of Cervix at the onset of labour have been associated with prediction values of the outcome of labour. Randeniya (2001) showed that the ante natal ultra sound measurement of lower uterine segment thickness highly correlates with the finding at caesarean section. Use of ultra sound in this aspect should be validated in clinical practice. Further, the progress of labour too is a useful predictive factor. Satisfactory progress in cervical dilatation (1cm/hour) with optimum uterine activity for the initial few hours of labour will lead to vaginal delivery(Arulkumaran et al 1989).

Use of oxytocin augmentation with satisfactory Bishop's core too will lead to vaginal delivery. Repeat CS is commonly performed in women with slow progress in labour, placenta praevia and significant foeto pelvic disproportion. Advanced maternal age and prolong inter pregnancy interval need not be the indications for repeat caesarean section.

Table II.Percentage of vaginal birth after caesarean section; Sri Lankan experience.

Rudra & Perera	72.5 %
Karunakaran et al	64.5 %
Panadare & Amarasinghe	60.00%

Factors predicting the pregnancy outcome with past caesarean section

Maternal age
Prior vaginal delivery
Estimated birth weight
Ante natal assessment lower segment by ultrasonography
Cervical dilatation at the onset of labour
Progress of labour

Medico legal consequences for failure in medical practice are rising gradually. However the current practice of conduct of delivery with previous CS in well equipped hospitals under obstetrician care and the women's choice of vaginal delivery after caesarian section minimize such risks.

Therefore proper selecting women for trial of scar, clear explanation of the conduct of the trial of scar to woman and her husband and prompt action when situation demands will make the practice of vaginal delivery after caesarean section, safe.

References

1.Arulkumaran S,Gibb DMF, Ingemarsson I, Kitchener HC, Ratnam SS,1989. Uterine activity during spontaneous labour after previous lower segment section. Br. J. Obstet Gynaecol 96: 933 -938

2.Arulkumaran S, Ingermasson I, Ratnam SS, 1989. Oxytocin augmentation in dysfunctional labour after previous caesarean section. Br J Obstet Gynaecol 96:939-941

3.Chattopadhyay SK, Sherbeeni MM, Anokute CC,1994. Planned vaginal delivery after two previous caesarean sections. Br. J. Obstet Gynaecol 101: 498-500

4.Chua S, Arulkumaran S, Haththotuwa R,1996 Management of women with previous caesarean section scar. In Arulkumaran S, Ratnam SS, Bhasker Rao K eds. The Management of Labour; Orient Longman Limited pp 317-327

5.Cunningham FG, Mc Donald PC, Gant NF, Gilstrap LC,1993. Caesarean section and Caesarean Hysterectomy. In Williams Obstetrics 19th ed. Prentice Hall Int. Inc. pp 591-613.

6.Leitch CR, Walker JJ,1998. The rise in caesarean section rate: the same indication but a lower threshold. Br J. Obstet. Gynaecol. 105;621-626

7.Panadare A, Amarasinghe WI,1998. Formulation of a Predictive Score System for patients undergoing trial of scar. Paper presented at the 31st annual scientific sessions of the Sri Lanka college of Obstetricians and Gynaecologists; August 1998. Abstract book p.14.

8.Randeniya C,2001. Does ante natal assessment of lower uterine segment by abdominal

ultrasound a worthwhile exercise in patients with previous caesarean section scar. Paper presented at the 34th annual scientific sessions of the Sri Lanka College of Obstetricians and Gynaecologists, august 2001: Abstract book p. 10.

9.Rao BK,1996. Caesarean Deliveries-Changing trends. In Arulkumaran S, Ratnam SS, Bhasker Rao K eds. The Management of Labour; Orient Longman Limited pp 308-315

10.Rudra T, Perera WSE,1995. Influence of oxytocin on the outcome of previous caesarean section scar. Paper presented at the 28th annual scientific sessions of the Sri Lanka College of Obstetricians and Gynaecologists, September 1995: Abstract book p.12.

11.Watson A, Boves Jr MD, 1999. Clinical aspect of normal and abnormal labor. In. Creasy RK, Resnik R eds. Maternal Fetal Medicine. W B Saunderz pp 555-559.

12.Wilkinson C, Mellwaine G, Boulton C, Cole S,1998. Is a rising caesarean section rate inevitable? Br. J. Obstet Gynaecol. 105:45-52

Fish in the Trachea

K.Seevaratnam*

This patient, who was transferred from Pottuvil with history of difficulty in breathing, after accidental slip of fish in to the throat while fishing, in the evening, and the patient arrived at T.H Batticaloa around 1.00am. He had mild to moderate breathing difficulty with throat discomfort, vital sings were stable and air entry to lungs slightly reduced. It was decided to do laryngoscopy and upper endoscopy because such a long fish can't enter the trachea, which can be fully obstructed by it.

Patient was taken to operation theatre immediately, direct laryngoscope and oesophaguscope done but no foreign body seen but patient's breathing was not improved. It was not able to extubate in the OT. Patient sent to ICU for monitoring around 3.00am.

X-Ray chest and neck taken in the morning. Right side hyperinflation of lung noted, patient immediately taken back to OT at 9.00am.

Ventilating bronchoscope was done a fish 10-12cm long was found in the trachea and removed. Patient improved from the breathing difficulty and discharged after few days without any complications.

This is a peculiar event, a live fish has slipped from mouth and entered into the trachea by its own movement, such a long 10-12cm fish didn't cause full obstruction of trachea.

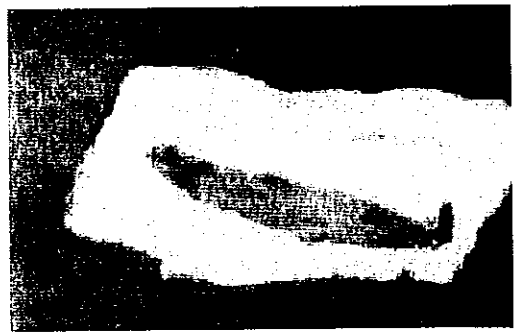
Note: The fish "Ahakai" which can pass any small hole, by changing its shape.

Foreign bodies in the aero digestive tract

a) Cafe coronary:-
Acute foreign body air way obstruction Bolus of foods lodges in the larynx or pharynx. Obstruction exceeds 6 minutes cause cerebral ischemia.

b) Other type of foreign bodies
Fish bone, meat bone, dentures, safety pins are the common foreign bodies in the pharynx and esophagus. Peanuts are usually inhaled into trachea & bronchus in children.

Clinical history, symptom & X - ray helps in diagnosing the condition. Rigid scopy helps in removing the F.B



The fish found in the trachea

Recovered patient with the foreign body

Reference:

Scott – Brown's Otolaryngology – and head and neck Surger

**ENT Surgeon, Teaching Hospital, Batticaloa.*

Basal cell carcinoma

C.Sebanayagam*

Abstract:

Mrs. P. V .Ariyawathy house wife 50 years old from Opananayaka admitted with the left eye lid lesion. Once it has been diagnosed as Basal cell Carcinoma of the nodular ulcerative type by doing the initial Incision biopsy. Excision done to the lesion with the reconstruction of the lid.

Case Report

Mrs P. V. Ariyawathy age of 50 years from Opanayaka, in the Ratnapura District, UVA Province, admitted with the history of a pigmented lesion in the left upper eye lid duration of one and a half years.

Gradually increasing in size as well as increasing of its pigmentation. No significant past history of Tuberculosis, Addison disease, or Bronchial Asthma. She is a mother of four children and a house wife. Her husband is a farmer. Regarding the system review no abnormality detected in the Respiratory system, cardiovascular system, Central nervous system and the Abdomen. Local examination revealed a lesion in the left upper eye lid which is a pigmented, multicentric in appearance and ulcerated. Uncorrected visual acuity VA[R] 6/12 [L] 6/24.

Slit lamp examination:

	Right	Left
Lid	Normal	upper lid lesion described
Cornea	Normal	Normal
Anterior chamber	No cells	No cells
Pupil	No additional pigmentation noted	No additional pigmentati-on noted
Lens	Normal	Normal
Fundus	Normal	Normal

Excision biopsy done on the lesion with the eye *lid reconstruction.* In this case *lower lid bridge flab done (cuttler beared procedure)* explained below.

Lower Lid Reconstruction Surgery:

If the lesion is less than 1/3 *direct closure with cantholysis,* if it is less than ½ the *semilunar flab* will be performed. If the lesion is more than ½ and if the vertical extent of defect below the margin is less than 5mm *tarsal graft* will be the choice. When the vertical extent of defect below the margin is more than 5mm *cheek rotation flab (mustrad flab)* will be the alternative.

**Consultant Ophthalmologist, Teaching Hospital, Batticaloa.*

Upper Lid Reconstruction Surgery:

If the lesion is less then 1/3 *direct closure with cantholysis* has to be done. If it is more than 1/3 and the vertical extent of defect above the lid margin is less than 5mm *tarsal graft* will be performed and if it is more 5mm and if the horizontal extent of the defect is less than ½ *semilunar flab* has to be done and if it is more than ½ *cuttler beared (lower lid bridge flab)*. This is the procedure done in this case.

Histology Report:

Histologically reported as Basal Cell carcinoma. Basal cell carcinoma of the eye lid could be nodular, nodular ulcerating or the Morphea form.

Nodular ulcerative type shows superficial vessels over the lesion. And the histology shows the palisade appearance.

In the Morphea form there is infiltration to the deeper structures.

Discussion:

Basal Cell Carcinoma of the eye lid is the commonest extra ocular malignancy in the eye lid region. In this case the report came as Basal Carcinoma of the nodular ulcerating type. But comment made on the involvement of the margin as well.

The second sample was sent for Histology. But unfortunately that report came as autolysis of the sample. On the two years follow up of the patient no recurrence was noted in the.

This is the third Basal Call carcinoma of lid lesion operated by the author successfully.

Acknowledgements:

I thank the Director G.H Rathnapura for giving permission for me to furnish this Case report. Also I thank the junior Doctors attached to the Department of ophthalmology for preserving the documents.

Reference:

Jack j. kansky, Duanes Ophthalmology, Collin lid surgery.