BATTICALOA MEDICAL JOURNAL

Established 1972 Volume 3, July 2007

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PRESIDENT MESSAGE

The Annual Scientific Session which is the single biggest event for the year in the programme conducted by the BMA. We have successfully conducted Annual Scientific Sessions in the past with the publication of first Journal of BMA in 2005 and we have published two volumes so far. I am delighted that this year also we have published 3rd volume of Journal of BMA. It becomes almost impossible for all of us to keep up with pace and wealth of information in advancing filed of medicine and this Journal gives an opportunity to exchange the advanced knowledge and our experience amongst our fellow members.

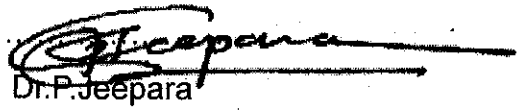
The Annual Scientific Session is a Continuous Medical Education Programme (CME) which helps to update the knowledge of the medical professionals to deliver good standard of health care to the public. It is with the great effort that this programme is being organized as there is very unsettled situation prevailing in this part of the island.

Apart from CME activities, BMA members actively participate in conducting clinics for internally displaced people. Further more because of effort of BMA members after tsunami; we were able to collect 2.6 Million Rupees which has been recently donated to the Rama Krishna Mission (RKM), Batticaloa to establish a Primary Health Care Center. Primary Health Care Center renders free health services to the poor patients especially to those affected by the tsunami and internal conflicts. I thank our BMA members who provide free medical service at the Primary Health Care Center (RKM).

We are gradually upgrading our BMA library which is being utilized by the BMA members and in future by the medical students. I thank U.K based *"Friends of Batticaloa Hospital"* who donated four computers to the BMA library.

Our members actively participate in the Faculty of Health Care Science (FHCS), EUSL activities such as Teaching to the medical students, planning, Curriculum development etc. I hope that if the resources are well utilized by the FHCS, students will get benefited and becomes medical professional of good standard.

My sincere thanks to the office bearers, fellows, friends who contributed to make this session successful and I wish that it will continue in future too.



Dr.P.Jeepara

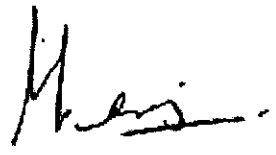
EDITOR'S MESSAGE

It brings us a great pleasure to publish third issue of Batticaloa Medical Journal during this unstable situation in our region.

As you are aware, compared to the last year present situation in this area has drastically deteriorated and as the result contributions, participation in academic activities as well as clinical research works also has declined sharply.

Our appreciation and thanks to all those who have contributed to us with their price-worthy articles, advices and various assistance, despite the lack of proper access to the needful literatures, journals or other sources; these valuable services have made this journal printed and published at this difficult time.

We hope this publication would be of a value to stay in touch and to earn a point of continuing medical education. Your genuine advice, suggestion and criticism to upgrade this journal in future would be most welcome.



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Dr.N.M.N.Munlir

Review

Current Management of Preterm Labour

Rudra Thangeswaran**

Preterm labour (PTL) is defined as spontaneous onset of painful uterine contractions and regular intervals with progressive effacement and dilatation of cervix between 24 weeks and 37 weeks of gestation. Prematurity following PTL is the commonest cause of perinatal morbidity and mortality in the developed nations. Pre maturity too is a major challenge to neonatal care in the developing countries like Sri Lanka.

Managing extremely preterm babies in the special care baby units and long term management of these babies is major burden to the state and the family. Apart from increasing maternal distress, PTL leads to high maternal morbidity due to obstetric intervention. The common neonatal complications are Respiratory Distress Syndrome(RDS), Intra ventricular hemorrhage, Necrotising Enterocolitis, hypoglycemia, hypokalemia, hypocalcaemia and sepsis are the major conditions leading to perinatal morbidity and mortality. Long term consequences such as retinopathy, cerebral palsy and mental retardation has tremendous impact on the social services and to the family unit.

Even though the treatment of preterm labour had been in existence for many decades, prolongation of pregnancy has not been achieved for more than few days. Prevention of preterm labour is the ideal way of addressing this issue.

Prevention of Pre Term Labour

Onset of pre term labour is a terrifying experience for a mother and her relatives. This is more so if they had previous pre term births resulting in adverse outcome or if they had similar episode in the index pregnancy. This increases the stress and anxiety levels of the mother having a cascading effect on the pregnancy leading to more chances of PTL. The mother at risk would demand any measures which could prevent such occurrence. Bed Rest, Progesterone and Cervical cerclage are some options.

Bed Rest

Resting in bed for many hours in a day for many weeks had been practiced traditionally as a form of preventive and therapeutic measure for the pre term labour and threatened miscarriage. Such a measure had not shown to curtail the incidence of PTL except in multiple pregnancies. However such enforced rest increases risks of deep vein thrombosis and maternal depression which are leading causes of maternal death in western world.

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Progesterone

Progesterone was used routinely for prevention of recurrent miscarriage in habitual aborters and for the prevention of PTL early 90s and it was less frequently used after meta analysis suggesting progesational agents are useful(4,6). Early part this century another meta analysis by Kierese using only 17α- hydroxyl progesterone caproate had rekindled the interest of these agents on the onset of pre term labour. He demonstrated that the odds ratio(OR) for pre term birth in women on these drugs was 0.50 with Confidence Interval (CI) 0.30- 0.85(6). Latest RCT performed using 17α- hydroxyl progesterone caproate demonstrated the Relative Risk (RR) for delivering less than 37 weeks, less than 35 weeks, less than 32 weeks respectively are 0.66, 0.67 and 0.58. Surprisingly infants born had lower incidence of intraventricular haemorrhage, necrotizing enterocolitis and less respiratory support (15,21).

Progesterones can be administered intramuscularly or vaginally. 17α- hydroxyl progesterone caproate is given intramuscularly at weekly intervals until 34 weeks. Progesterones are associated with increased incidence of Obstetric cholestasis (21) We should await more studies regarding safety of Progesterones before we recommend for prevention of PTL.

Cervical Cerclage

Cervical cerclage is used for mid trimester miscarriages when cervical incompetence was suspected clinically or by ultrasound. This procedure is performed at any gestation after first trimester. Merselene tape is recommanded and Mc Donald's or Shirodkar's technique is utilised.

Meta analysis of low risk women who had the cerclage did not prove any benefit regards to pre mature labour and perinatal survival rates. However mothers who are at the risk of pre term labour had a significant reduction of pre term births less than 37 and 34 weeks gestation with the OR of 0.72 and 0.80 respectively. Though there are no major RCTs proving the effectiveness of cervical cerclage, this procedure has a place in the high risk women.

Management of Pre Term Labour

The objective in managing pre term labour is to prolong the pregnancy at least to term and to anticipate the possibility of pre term birth. Each day gained between 24 to32 weeks increases the perinatal survival by 3% (5). In such circumstances the fetus or neonate should be provided with optimal medical care to prevent or minimize the perinatal complications. Managing a pre term labour depends on the many factors listed below.

Table1: Factors determining the management of PTL

Period of Gestation at presentationPrevious obstetric outcomeAssociated Obstetric and medical complicationsPresentation of FetusBishop's ScoreNeonatal facilities in the hospital

The level of Special Care facilities available in the institution is an important aspect of management of this condition. If the women presenting in labour or any features of imminent pre term labour, at a gestation which the special care baby unit lack resources, these mothers had to transferred to the nearest unit which could safely care such preterm infants. The exceptions to this should be when such transfers could either jeopardize maternal or fetal life or when the mothers refuse to be transferred out. Even if the mother is transferred they should

be stabilized. In order achieve the optimum care the patient and her relatives should be counseled about the possible outcome and prognosis at the time of presentation. Such discussion should be in the presence of both obstetrician and the neonatologist.

The other factors such as period of gestation at presentation and the presenting part of the fetus too are vital for the obstetric management of these women. Similarly the other medical and obstetric conditions associated with pre term labour would influence the treatment of this condition.

Management of pre term labour is still a major challenge for both obstetricians and neonatologists. Treatment modalities available are Bed Rest, Rehydration, Tocolytics, Steroids and Antibiotics

Bed Rest

As discussed earlier the bed rest does not play any role in treating mothers who had spontaneous onset of preterm labour.

Hydration

Hydrating the women with intra venous fluids were compared with Bed Rest in 228 patients who presented with PTL. The hydrated women who delivered less than 37 weeks had a (RR) 1.09 with the (CI) 0.71 – 1.68 and for deliveries earlier than 34 weeks had a RR of 0.72 and CI 0.20 – 2.56. These figures indicate that hydration and bed rest have similar outcome in the PTL without any benefit(25).

Maternal Steroids

Administration of steroids to the mothers is the cornerstone in the management of pre term labour in modern obstetric practice. The main benefit is to enhance the pulmonary maturity hence reducing the incidence of RDS RR 0.66 CI 0.59 – 0.73, there by reducing the respiratory support RR 0.80 CI 0.65 – 0.99. The other neonatal complications such as Intra Ventricular haemorrhage RR 0.59 and CI 0.43 – 0.69, Necrotising Enterocolitis RR 0.46 CI 0.29 – 0.74 and neonatal systemic infection of neonate RR 0.56 and CI 1.38 – 0.88. The overall impact on the Neonatal death rate is favorable RR 0.69 and CI 0.58 – 0.81(1,4,19) .

The steroids are indicated for mothers between 24 to 36 weeks of gestation. The beneficial effect commences after 24 hours of administration(19). Current practice is only to administer only one course rather than repeating the doses. Dexamathzone, Betamathazone or hydrocortisone are used. Steroids neither increases the maternal or neonatal asepsis. PPROM also could receive steroids in the absence of sepsis.

Antibiotics

Some studies have used Erythromycin Intravenously for 3 to 5 days in women presenting with threatened pre term labour (12). They have shown this modality of treatment prolongs the pregnancy in the short term, without significantly improving the perinatal morbidity or mortality. However those who presented with pre term pre labour rupture of membranes and had oral antibiotics, had a significant improvement on the perinatal outcome and prolongation of pregnancy (1, 11) .

Tocolytics

Tocolyitc agents act on the myometrium leading to suppression of labour resulting in prolongation of pregnancy. Initial enthusiasm shown on the tocolytic agents have been slowly lost due to their major adverse effects without

significant impact on delaying the pregnancy. The current indications for use of these drugs are to transiently suppress labour for the maternal steroid effect on the fetus and as a measure to transfer to the tertiary referral centres. Oral administration of tocolytic agents are not indicated any more as a treatment or for future prevention of pre term labour since they have not prolonged the labour or improved PMR (5,6,21) Tocolytics are not advised in the following conditions.

Table2:Contraindications for Tocolytics

Severe Pre Eclampsia or EcalmpsiaAntepartuum HaemorrhageChorioamnionitisLethal fetal anomalyIntrauterine Death Drug adverse effects

Many therapeutic agents had been used to suppress uterine contractions and some of them are listed below.

Table 3 : Tocolytics

Group of drugs	Examples
βSympathomimetics	Salbutamol Ritrodrine Terbutalin
Calcium Channel Blockers	Nifidipine
Oxytocin receptor antagonists	Atosipan
Magnesium group	Magnesium Sulphate
Prostaglandin Inhibitors	Celcoxib
Indomethazine	
Alcohol	Ethyl alcohol

βSympathomimetics

These are the most widely used agents for suppression of pre term labour until a decade ago. However these agents are replaced by the oxytocic receptor antagonists at present. The βSympathomimetics are still the most commonly used tocolytics in the developing world like Sri Lanka due to the cost of Atosipan. The βSympathomimetics bind the β2 receptors in the myometrium leading to reduction in the intracellular calcium resulting in desensitization of the actin- myosin contractile unit to calcium (21). However the non selective activity on the other organs leads to the side effects. They are given as intravenous infusion and doses are titrated according to the response and side effects. Intensive monitoring of maternal and fetal clinical parameters in addition to investigations such as U&E and blood sugar levels are essential during this drug therapy (24,8) .

Recent Canadian study revealed that Ritrodrine when compared with the placebo did not show beneficial effect on the Perinatal Mortality Rate, frequency of prolongation of pregnancy to term and on the birth weight. However the labour was delayed by 24 to 48 hours which is the time needed for the desired effect of maternal steroids on the fetus (20) . In contrast Terbutalin did not have any impact whether short term or long term.

βSympathomimetics are notorious to show tachyphylaxis phenomena where increasing doses are needed to maintain the desired effect over a period of time. This increases the adverse effects on the mother and fetus. The tachycardia, hypertension, raised blood sugar levels are seen both in the mother and fetus or neonate who received these drugs for suppression of labour. Mothers are also exposed to myocardial ischemia, raised insulin levels and pulmonary oedema (10,23) . Neonates who are exposed to βSympathomimetics in utero are prone to hypokalemia and increased incidence of intra ventricular haemorrhage (23). The effect on the maternal blood sugars are significant in those diabetic mothers who are also administered with steroids. Hence use of these agents to suppress labour had to be closely monitored and the long term administration had to be discouraged.

Calcium Channel Blockers

Role of Calcium Channel Blockers in obstetric practice had been established for management of pregnancy induced hypertension. These agents act on the myometrium by inhibiting it's contractility(16). They reduce the amplitude and frequency of the uterine contractions resulting in inhibition of contractions whether spontaneous and induced.

Nifidipine is the most frequently used selective calcium channel blocker which is given orally and the absorption and onset of action is rapid compared to the other tocolytic agents. Nifidipine is commenced with an initial dose of 30 mg followed by 20mg repeated at 6 to 8 hourly (8) .

The short term suppression of pre term labour is comparable to that of ritrodrine. Indeed nifidipine prolongs the pregnancy 2 weeks more than ritrodrine. In contrast to βSympathomimetics, nifidipine has less maternal and neonatal adverse effects (5,10). Most frequently reported maternal effects are hypotension, dizziness, headache, minor gastro intestinal side effects, reflex tachycardia and palpitations (16,21) . These are cheap drugs and easily administered. Due to lack of data comparing the calcium channel blockers with the placebo, safety of these drugs for routine use for suppression of uterine contractions is still in doubt. Hence more RCTs are awaited before calcium channel blockers could be recommended for tocolysis.

Oxytocin Receptor Antagonists

Atosipan is the most commonly used oxytocin receptor antagonists in the European countries for suppressing the PTL. However they are ineffective in preventing the onset of labour. The sensitivity of oxytocin and levels of oxytocin are raised in those who had pre term labour and the Oxytocin Receptor Antagonists oppose their effect (8, 22) .

There are many studies comparing atosipan with ritrodrine for pre term labour. Atosipan is comparable to ritrodrine in suppressing the uterine activity for 48 hours. The side effects are less with atosipan. Commonly reported side effects are 8% on CVS compared to 81% with ritrodrine. 3% incidence of fetal tachycardia compared with 28% reported with the βSympathomimetics (3,5,21). However The infants born following atosipan therapy are 138.3 grams lighter than the ritrodrine group (10, 17, 22) . Unexpected sudden infant deaths within the first year of birth is more frequent in the atosipan group(17) .

Studies have shown that atosipan compared with placebo neither decreased the incidence of pre term birth nor improved the neonatal survival (6, 17).

Magnesium Sulphate

The MgSO4 which is popular in USA, impairs the calcium induced myometrial contractility. For the desired effect high serum levels such as 4 to 8 mEq/l had to be achieved(1,13). The studies comparing MgSO4 with placebo for tocolysis had not revealed significant difference in prolongation of pregnancy (3) .

The maternal side effects are dose related. Obliteration of patellar reflex, headache, respiratory arrest and pulmonary oedema are some of them. There is evidence of increased deaths in the neonates who were exposed to MgSO4 in utero. Due to the narrow therapeutic range and serious adverse effects they are infrequently used for tocolysis (8,13) .

Prostaglandin Inhibitors

Increased levels of prostaglandins are found in the myometrium of mothers who have spontaneous onset of preterm labour. Hence

inhibition of prostaglandin is another mechanism of suppression of myometrial contractility [21]. The Indomethazine and COX inhibitors are some of the agents which were used as tocolytics. These drugs were given either orally or per rectally in high doses [3,9]. Serious GI side effects, renal dysfunction and heart failure were frequently reported in the mothers. The fetus who were exposed had oligohydramniosis and constriction of Ductus Arteriosus (62%) mainly beyond 32 weeks gestation. Serious neonatal complications such as Intra Ventricular haemorrhage (29%), Necrotising Enterocolitis (28%) and Primary Pulmonary Hypertension are reported. Due to the above concerns the NSAIDs have lost their role as tocolytics [8,10,25].

Alcohol

Data is lacking regarding it's safety and efficacy during pregnancy for suppression of PTL.

Conclusion

Pathogenesis, prevention and treatment of preterm labour is still a poorly understood entity in obstetrics. Only well designed multi centre randomized controlled trials could provide scientific medical approach to treat this common condition. We do not have choices other than using the short acting tocolytics and depend on few preventive measures to reduce the incidence of pre term birth.

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Review

Management of Differentiated Thyroid Cancer (DTC).

Jeyakumaran.N.[1]

Introduction:

The two most common forms of thyroid cancer, papillary and follicular thyroid cancer, together termed differentiated thyroid cancer (DTC), comprise the majority of thyroid cancers and have the best prognosis.

Malignant lesions derived from thyroid epithelial cells are relatively rare. Clinically recognized thyroid carcinomas constitute less than 1% of all human malignant tumours. It is the most common endocrine malignant tumour. DTC frequently develop in young adults, with the highest incidence occurring between 25 and 54 years of age.

Optimal care of patients with thyroid cancer requires involvement of multidisciplinary team, including physicians with special expertise in endocrinology, surgery, pathology, clinical oncology, radiology and biochemistry.

Diagnosis of thyroid cancer necessitates cytological or histological confirmation. FNA biopsy is the most cost effective procedure to differentiate benign and malignant nodule as well as to diagnose papillary carcinoma of thyroid. For the diagnosis of follicular carcinoma, it is mandatory to go for excision biopsy to demonstrate tumour invasion through the capsule of the tumour or invasion of blood vessels.

Ultrasonography, computerized tomography (CT), and magnetic resonance imaging (MRI) assist in staging and treatment planning by defining tumour size and extension to adjacent structure as well as demonstrating nodal involvement of the neck and mediastinum.
Risk Stratifications for DTC mainly depend on the following factors.

1. Age at the time of initial assessment.
2. Tumor size.
3. Histological grade.
4. Presence of extrathyroidal invasion.
5. Presence of distant metastatic lesions.
6. Lymph node metastatic lesions at the time of initial examination.

The principal factors contributing to high risk are older age, male gender, poorly differentiated histological features, larger tumour, extrathyroidal invasion and metastatic spread. Although nodal metastatic lesions are uncommon in follicular thyroid cancer, their presence may indicate a worse prognosis.

Treatment:

Existence of controversies in the management of DTC is due to the fact that no prospective randomized trials for the treatment have been conducted and none are likely to be done as well.

Consultant in Clinical Oncology: Teaching Hospital - Jaffna

Surgical treatment is the preferred initial management in almost all patients with thyroid cancer. Several prognostic factors are important for predicting the outcome in patients with thyroid. cancer. This information allows appropriate counseling and selective post operative therapy.

Many patients with differentiated thyroid cancer are treated with radio active iodine therapy and few require external beam radiotherapy or chemotherapy.

Debated issues include the following...

1. The extent of primary surgical resection.
2. The need for and the extent of regional lymph node dissection.
3. The role of post operative radio active iodine treatment.
4. The degree of suppression of thyrotropin.
5. The role of external beam radiotherapy.
6. The role of chemotherapy.
7. Novel therapeutic modalities

A. Surgery:

For papillary thyroid cancers smaller than 1cm, which do not extend beyond the thyroid capsule or angioinvasive, ipsilateral lobectomy may be appropriate. Total or near total thyroidectomy is the preferred operation for high risk patients with papillary thyroid cancers, when bilateral nodules are present or cancer is bilateral or when the primary tumor extends beyond the thyroid capsule, or when local or distant metastatic disease is present.

The main reasons for offering total or near total thyroidectomy in papillary thyroid cancers, are....

1. Multifocal in nature.
2. Spread of tumour throughout the thyroid by intra thyroidal lymphatic drainage.
3. To facilitate the postoperative use of ^{131}I to ablate residual thyroid tissue and to identify and treat distant tumor.
4. To increase the sensitivity of thyroglobulin to detect early recurrence.
5. Lower recurrence rate.

Treatment strategies in low risk papillary carcinoma are based on retrospective analysis. A well designed prospective study is necessary to determine the optimal therapy based on cost benefit analyses, risk, recurrence rates, and survival.

When FNA cytology findings are reported as "indeterminate or suspicious for follicular or Hurthle cell neoplasm", ipsilateral thyroid lobectomy with isthmusectomy is recommend. When the lesion is benign, no further therapy is needed. When the tumor is malignant, completion thyroidectomy is indicated, to facilitate subsequent radioactive iodine (RAI) scanning and therapy. When follicular carcinoma is minimally invasive and characterized only by limited capsular invasion, lobectomy with isthmusectomy itself would be adequate.

Ipsilateral lymph node metastatic lesions occur in only about 10% of patients with follicular thyroid cancer and in about 25% of patients with Hurthle cell cancer. Enlarged lymph nodes in the central neck area should be removed. A functional lateral neck dissection is indicated for patients with clinically palpable nodes. In patients with clinically uninvolved nodes but deemed high risk (ie any of the following features: male sex, age > 45 years, tumours greater than 4 cm in diameter, extracapsular or extrathyroidal disease), total thyroidectomy and level VI (Pre and paratracheal) node dissection should be performed.

Adjuvant Therapy:
B. Post Operative Radio Active Iodine (RAI) Ablation & Treatment:

Many patients with DTC receive RAI (^{131}I) to ablate residual thyroid tissue postoperatively. It is defined as the destruction of residual macroscopically normal thyroid tissue after thyroidectomy. This treatment is used as an adjunct to surgical treatment when the primary tumour has been completely resected. The RAI therapy, involves use of larger doses of ^{131}I in an attempt to destroy persistent neck disease or distant metastatic lesions.

Advantages of RAI treatment:

1. RAI may destroy microscopic cancer cells within the thyroid remnant because of their proximity to the remaining normal thyroid tissue.
2. Subsequent detection of persistent or recurrent disease (particularly in the neck) by radioiodine scanning is facilitated by the destruction of remaining normal tissue.
3. Sensitivity of serum thyroglobulin measurements is improved during follow-up.

The standard ^{131}I dose prescribed for this treatment varies from 75 to 150 mCi (2,775 to 5,550 MBq). In recent years, some US centers use a low dose regimen of 25 to 30 mCi (925 to 1,110 MBq), especially if the amount of thyroid remnant tissue is small.

The low dose regimen is less expensive, results in a lower dose of whole body irradiation, and does not necessitate hospitalization. In some states, however, newer guidelines from the Nuclear Regulatory Commission permit the use of higher outpatient doses of RAI.

C. Thyroid Hormone Suppression of Thyrotropin:

The administration of supraphysiologic doses of thyroxin to suppress serum TSH in patients with DTC deprives these cells of an important growth promoting influence. This suppressive treatment is given at a dose that maintains TSH concentration at a serum level of < 0.1 mU / L.

Long term thyroxin suppressive therapy may have adverse effects on bone and the heart, including accelerated bone turnover, osteoporosis, and atrial fibrillation. Consequently, many experts maintain that long term complete TSH suppression < 0.1 mU / L should be reserved for higher risk patients, at high risk for recurrence or mortality and those with persistent or recurrent carcinoma that cannot be eradicated.

D. External Beam Irradiation:

External beam irradiation is rarely used as adjunctive therapy in the initial management of patients with DTC. It may be beneficial, however, in patients with poorly differentiated tumors that do not concentrate RAI. It also may be considered in the postoperative management of patients with DTC who have gross evidence of local invasion and who are presumed to have microscopic residual disease after primary surgical treatment. The situation differs considerably with respect to less well differentiated thyroid malignant lesions and for the localized bony metastatic lesions, particularly those associated with pain.

E. Chemotherapy:

Chemotherapy for patients with DTC is used for symptomatic or advancing tumors that are surgically unresectable, or unresponsive to RAI, and have been treated with, or not amenable to, external beam irradiation. Nevertheless, no chemotherapeutic regimen has been consistently

successful, although both combination chemotherapy and doxorubicin monotherapy have been used.

F. Molecular targeted treatments:

There are two main theoretical approaches.....

1. Inhibition of tumour growth by inhibiting cell signaling and angiogenesis.
2. Induction of redifferentiation of thyroid tumour tissue.

G. Other drugs:

Anti EGRF antibodies.
COX-2 inhibitors.

Although long term survival is common, patients are at risk of tumour recurrence for decades after diagnosis, hence long term surveillance, incorporating radiological and radionuclide imaging and measurement of thyroid specific tumour markers, is necessary.

Conclusion:

Most patients with papillary or follicular carcinoma can be treated successfully, and others can survive for decades despite persistent disease. Surgery remains the initial and potentially curative treatment for DTC. Following total or near total thyroidectomy, ablation of thyroid remnants with RAI reduces the risk of loco regional recurrences and cancer specific mortality, mainly for patients with poor prognostic factors. High dose RAI treatment is the mainstay of treatment for disseminated thyroid cancer. Thyroxin suppressive treatment stops or slows down TSH dependent tumour growth. Postoperative radiotherapy is recommended in patients with locally advanced disease at presentation. Chemotherapy has a palliative role. Few patients need novel therapeutic modalities, involving molecularly targeted treatment, because their disease cannot be controlled.

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DIABETES IN PREGNANCY, A LOCAL SYNOPSIS

K.Muhunthan

Introduction

Almost 20 years after the 'St Vincent declaration', which stated that the outcome of diabetic pregnancy should approximate the non-diabetic pregnancy, it may take decades for us to reach the above goal as even the wealthiest of countries are struggling to achieve it. As diabetes complicating pregnancy is the most common medical disorder in pregnancy with an increasing trend in Type 2 diabetes and Gestational Diabetes Mellitus (GDM), it is prudent to review the current evidence based and non evidence based practises.

Historical and Demographic View

Before the invention of Insulin, type I diabetics rarely became pregnant. In those who did conceive, the maternal mortality rate was approximately 40% (mainly because of ketoacidosis) and fetal and neonatal survival was less than 50%. The first case report of gestational diabetes mellitus appeared in 1824, with a description of a mother with thirst, polyuria and glycosuria and the death of a macrosomic infant from shoulder impaction. The view that there is regional variation and genetic predisposition namely to type I and Type II diabetes has now been confirmed with the Samoan Islanders having the highest prevalence of type II diabetes and the Asians especially from the South Indian Continent being high in the list.

There is also 10-fold prevalence of Gestational Diabetes Mellitus (GDM) among Asian immigrants in the UK compared to the local population.

Classification of Diabetes

Pre Existing Type I & II Diabetes

Ideally all women Pre Existing Type I & II Diabetes should be seen preconceptually. Tight glycaemic control is statistically associated with a reduced incidence of congenital malformations, which are 3-5 folds commoner compared to the non-diabetic population. There is also an opportunity to address obesity at this time, as many type 2 diabetics are overweight and obesity constitutes a major risk factor in pregnancy. Type II diabetics will be on oral hypoglycemics or insulin and with the growing evidence of the safety of Metformin and Glibenclemide, it is reasonable to conceive while on these drugs and to switch to insulin at the earliest possible opportunity.

An unfortunate practice commonly encountered in this region is to give up all forms of oral hypoglycemics as soon as someone becomes pregnant. It denies her from the benefit of good glycaemic control especially during the period of fetal organogenesis, which reduces the rate of congenital malformations.

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Type I diabetics will anyhow would be on insulin therapy and the likely need to increase the dose could be achieved in dedicated obstetric units.

Undiagnosed Diabetes

A sizable proportion of patients who are diagnosed early in pregnancy as gestational diabetes would in fact be patients with undiagnosed pre-existing diabetes.

Unfortunately even if they present in the first trimester for treatment they would not be protected from the congenital malformations due to the fact that during the organogenesis the foetus would have been exposed to hyperglycemia.

Gestational Diabetes Mellitus (GDM)

Gestational Diabetes Mellitus (GDM) is defined as carbohydrate intolerance of varying severity with onset or first recognition during pregnancy. Considerable controversy surrounds its diagnosis, significance and treatment. The World Health Organization has defined gestational diabetes mellitus and impaired glucose tolerance as two hours after a 75 g oral glucose load more than 11 mmol/l and 8–11 mmol/l respectively. However, these criteria were based on a nonpregnant population. Following an abnormal glucose tolerance test, many advocate dietary advice and further blood glucose monitoring before considering insulin treatment.

Screening for Gestational Diabetes

The American Diabetes Association and the American College of Obstetricians and Gynecologists have endorsed the use of a 50 g oral glucose load at 24–28 weeks of gestation. A glucose level of 7.8 mmol/l or more warrants a full diagnostic oral glucose tolerance test.
Women at increased risk of gestational diabetes include those with a family history of diabetes or personal history of gestational diabetes, those with a previously unexplained stillbirth, glycosuria, polyhydramnios, those from many ethnic minorities, obesity and maternal age.
Considering our ethnic predisposition, it is prudent to have a lower threshold to consider the above biochemical screening test or even to perform the diagnostic test if there are pointers suggestive of increased risk of GDM. It should be pointed out that there is widespread variation in the choice of screening methods even in the UK obstetric units and there is no evidence base for any of such a protocol.

Glycaemic Control During Pregnancy

Throughout pregnancy, women should be monitored regularly in an antenatal diabetic clinic. They should be seen at least every two weeks until 34 weeks of gestation and then weekly until delivery. Glycaemic control should be monitored by patient records performed through glucometers or an in-ward blood sugar series.

In our own experience performing post prandial levels avoiding pre-prandial levels are as effective as performing 6-8 point BSS. This could be supported by the fact that fetal macrosomia and other neonatal complications mentioned below are related to maternal postprandial glucose levels.

The woman's usual insulin regimen should not be changed if she has good diabetic control. Those with poor control should be changed to four injections per day with three pre-meal injections of short-acting insulin and one of intermediate-acting (or occasionally long acting) insulin at bedtime.

In our current practice we are able to achieve safe post prandial levels with twice daily intermediate-acting insulin in almost 80% of patients.

A major drawback commonly encountered is to convince patients to modify their diet. This could be overcome by dedicated staff willing to spend time on dietetic advice with the knowledge of the 'glycaemic indices' of locally available foodstuff.

Fetal Surveillance

Serial ultrasound scans, ideally performed every four weeks until 32 weeks of gestation and fortnightly hereafter, provide information about fetal growth and the presence of polyhydramnios and macrosomia. The abdominal circumference at 28–29 weeks of gestation has been shown to be predictive of subsequent macrosomia. Excess growth apparent at this gestation highlights the need for optimization of glucose control and close surveillance during the third trimester. The relationship between diabetic control and fetal growth is not, however, entirely straightforward, as macrosomic babies can be born to mothers with apparently excellent glycaemic control. Maternal obesity is also a risk factor for macrosomia. Fat reduces insulin sensitivity, making avoidance of obesity in those with gestational diabetes especially important. The fetal biophysical profile has been shown to be of value for monitoring fetal wellbeing in diabetic pregnancies and is thought by some to be the single most useful means of assessing fetal wellbeing in late pregnancy in diabetic women.

Obstetric Complications

Pre-eclampsia is twice as common in diabetic pregnancies and the risk is correlated with the degree of glycaemic control. Polyhydramnios occurs in about 15% of diabetic pregnancies and is again related to hyperglycemia. Polyhydramnios generally reduces as diabetic control improves. The excess fluid is thought to be caused by fetal osmotic diuresis secondary to hyperglycemia. Preterm labour occurs in up to 20% of diabetic pregnancies. Treatments other than sympathomimetics are more appropriate choices for tocolysis because of fewer effects on glycaemic control. Guidelines from the RCOG also advise that the use of antenatal steroids in pregnancies complicated by diabetes is uncertain in view of the adverse effects of maternal hyperglycemia on fetal lung maturation. Caution is therefore advised when using antenatal steroids with a sliding scale involving high doses of insulin to optimize glycaemic control.

Timing and Mode of Delivery

In women with good diabetic control and an uncomplicated pregnancy it should be possible to reach 39 completed weeks of gestation. Beyond this time there is little evidence of benefit and some evidence of harm. Poorly controlled diabetes may require earlier delivery but this will increase the risk of neonatal respiratory distress syndrome and jaundice. The mode of delivery is dependent upon a number of factors including parental choice, past obstetric history, estimates of fetal weight, prediction of asymmetrical macrosomia and fetal wellbeing. Spontaneous vaginal delivery should be the method of choice for all women with diabetes, wherever possible.

Neonatal Care

Neonatal complications of maternal diabetes are related directly or indirectly to hyperinsulinaemia. Respiratory distress syndrome appears to be secondary to suppression of surfactant production by type-2 alveolar cells in the lung caused by excess insulin. Polycythaemia is probably due to increased hepatic erythropoeisis. This can lead to jaundice and increased blood viscosity and is a risk factor for thrombosis (most notably renal vein thrombosis). Insulin suppresses microsomal enzymes and this immaturity inhibits the ability of the liver to conjugate bilirubin, hence the risk of kernicterus is

increased. Availability of a dedicated pediatric team with special interest in dealing with such babies cannot be overemphasized.

Six-week check

All women should be seen for a six-week postnatal check at the hospital. All those who developed gestational diabetes requiring insulin should have a glucose tolerance test performed between six weeks and three months postpartum. It may be that an abnormal test in pregnancy has uncovered previously undiagnosed type 2 diabetes rather than just 'gestational diabetes'. Even those with normal results at this time should be made aware of their lifetime risk of developing type 2 diabetes and advised to avoid excess weight gain and to take regular exercise. With regard to contraception, modern day low-dose combined oral contraceptives are generally considered safe for those with type 1 diabetes. IUCD or female sterilization if she has completed the family would be a reasonable choice.

Conclusion

The discovery of insulin transformed the prognosis for women and the fetuses with preexisting diabetes complicating pregnancy and GDM. Still a momentous improvement of the management of both pre-existing and GDM need to be made if pregnancy outcome is to be comparable to those without diabetes as stated in the St Vincent declaration. Considering the genetic predisposition of the local population, our experiences suggest that it is possible to significantly improve the maternal and neonatal outcome by developing a local or regional strategy for screening and treating diabetes complicating pregnancy with available limited resources.

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POSTOPERATIVE PAIN MANAGEMENT

S.Baskaran *

"For all the happiness that man can gain, it is not in pleasure but in rest from pain" – John Dryden, 17th Century writer.

In developing countries such as ours postoperative pain management is still very primitive when compared with the western world. Sometimes it is very disheartening and frustrating to be in a situation where one is unable to bring much needed relief to a suffering patient and feel helpless about it despite the technological advancement in medicine in the world today. Should the patient continue to suffer because physicians are either afraid of using analgesic drugs or inadequate knowledge about handling pain management? Undoubtedly, most of our medical doctors try their best to reduce the postoperative pain of their patients and would rarely disregard postoperative pain management. One of the primary tasks of a physician is to bring the earliest relief to suffering patients using whatever available resources. This article attempts to update the reader's knowledge about acute pain and its management.

Pain was defined by Sherington a world famous pain physician as "*A psychical adjunct of an imperative protective reflex*". The International Association for the study of pain defines pain as *"an unpleasant sensory and emotional experience associated with actual or potential tissue damage"*. The write assumes these definitions as being valid in treating this subject.

Good control of postoperative pain prevents unnecessary patient discomfort, lengthy hospital stays, undue medical expenses, poor clinical outcomes, and extensive utilization of already overburdened healthcare resources and prevents chronic pain (pain for more than 6 months).

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Effects of unrelieved postoperative pain. (4,10,7)

Respiratory Reduce functional residual capacity & vital capacity,

V/Qmismatch Hypoxia, hypercarbia,
Anaesthesiologist and Critical Care Physician

decreased cough, atelectasis, Sputum retention.

Cardiovascular
Tachycardia, hypertension, increased SVR, increased,cardiac work (Increase Myocardial oxygen demand) increase tendency of coagulation

Gastrointestinal/ genitourinary Nausea, Vomiting, ileus, retention of water and sodium.

Metabolic
Catabolism(increase,cortisol,glucagons& catecholamines)

Renal
Oliguria, urinary retention

Extremities
Skeletal muscle pain, limited mobility, thromboembolism.

Immunologic. Impairment

Psychological
Anxiety, depression, increases subjective pain experience.

Pain pathways (1,4,7)

Tissue damage causes release of inflammatory mediators from tissue immunes while sympathetic sensory afferent nerve fibers results in an 'inflammatory soup' bathing the nociceptors. Nociceptors are naked nerve endings.

Aδ myelinated fibers transmit action potentials quickly, and are the first step in the sensation of 'fast pain' which leads to reflex withdrawal. Unmyelinated C- neurons, responsible for 'slow pain' and immobilization of the affected part.

After stimulation, first – order Aδ and C fibers transmit action potentials to the spinal cord via the dorsal horn. Their cell bodies lie within the dorsal root ganglia. They synapse with second order neurons in the posterior horn of the spinal cord. Aδ and C fibers terminate in several layers in the rexed laminae, including the outer marginale zone - lamina 1 and in particular, the substantia gelatinosa – lamina 2. The dorsal horn cells in the substantia gelatinosa respond to noxious stimuli only. These neurons ascend in the contralateral spinothalamic, spinoreticular and spinomesencephalic tracts to higher centers associated with consciousness, discrimination, and affective aspect of pain. (Limbic system is responsible for affective aspect of pain.)

Pain transmission may be modified at the synapse of first and second-order neurons. Descending Aβ- fibres from the brainstem and hypothalamus can diminish transmission at this synapse by 'gathing' it with inhibitory neurotransmitters such as GABA, endorphins, enkephalines, adrenaline and 5HT. Local 'wide dynamic range' neurons may be switched into a positive feedback mode by excitatory neurotransmitters such as glutamate, substance P and NMDA, increasing transmission so that pain outlasts the stimulus. They may be responsible for the development of chronic pain states.

Measurement of pain. (1,2,7,8,10)

Pain is a subjective experience which no machine can measure. The only person who can determine the presence and degree of pain is the patient. However, the magnitude of pain and the response to treatment can be monitored in several ways. A scale of 10 faces, ranging from very happy to very sad, can be used in young children. The child points to the face matching the way he or she feels. Similar scales using color or numbers have been devised for adults.

An alternative approach to assessing pain in children is measuring their pain behaviour, such as crying or tantrums. One obvious difficulty is that behavioural changes associated with pain may be associated with hunger, separation from parent, etc. despite this problem, several behavioural scales have been introduced and are particularly useful in assessing postoperative pain. One of these is the CHEOPS (The Children Hospital of Eastern Ontario pain scale), which measures crying, facial expression, body position, verbal expression, touch position and leg position. Verbal descriptive scales, such as the McGill pain questionnaire, are useful both for clinical and research purposes. Numerical pain rating scales are similar to the VAS but replace the line with the numbers 0 -10. In ICU setup a more simple scoring system has been used. The score is given as 1- 4 according to the patients response to movement. Score 1 implies no pain at rest and no pain on movement, Score 2 means no pain at rest but mild pain on movement. This is the ideal condition in an acutely ill patient. Score 3 implies mild pain at rest & severe pain on movement, Score 4 means severe at rest and on movement.

Medications are useful in treating acute pain (3,5,10)

The contemporary standard for pain relief is achieving analgesia while the patient is active, i.e.: coughing, ambulating, or home bond, rather than simply at rest. This acknowledges the potential benefit of modern-day postoperative pain control from peripheral and central nerve blocks and intellectual medication use and advances the practice of pain medicine in concert with progress in clinical care.

The medications useful in treating acute pain are similar to those used in treating other types of pain. The World Health Organization analgesic ladder developed for treating patients with cancer pain also provides a useful approach to treating acute pain. At the lowest level (mils Pin), nonopiois analgesics such as nonsteroidal anti-inflammatory agents ($NSAID_s$)

(e.g: ibuprofen or paracetamol) are useful. Such drugs have an analgesic ceiling; above a certain dose, no further analgesia is expected. For moderate pain, compounds combining acetaminophen or aspirin with an opioid are useful. The inclusion of acetaminophen limits the amount of such agents that should be used within a 24- hour period, because toxic accumulations can occur. For severe levels of pain, an opioid such as morphine or hydromorphone is a better choice; such opioids have no analgesic ceiling. Most postoperative or trauma patients initially respond better to a morphine- equivalent opiod. By the time the patient is eating and ready for discharge, mildopioid, paracetamol or NSAIDs are often adequate.

Not all types of pain respond equally to the same medication. *Opioid analgesics are helpful in controlling somatic or visceral pain.* Bone pain may be helped partially by opioids. However, *NSAIDs and steroids are highly effective in treating bone pain.* The combination of NSAIDs and opioids is synergistic in controlling pain. Neuropathic pain, often described as pain with a burning, hyperesthetic quality, responds to a diverse group of drugs, including antidepressants (amitriptyline), anticonvulsants (carbama zepine or clonazepam), antiarrhythmics (mexiletine), baclofen, and alpha – adrenergic agonists (clonidine).

Factors affecting the choice of analgesia technique (4,7,9)

Patient factors

Consent, age, comorbidity mental state

Anaesthetic factors

Anaesthetic skills, fitness for general anaesthesia, drugs available

Surgical factors

Type of surgery (elective, emergency), duration, blood loss

Nursing factors

Skills, staffing levels

Institutional factors

Equipment, location (HDU, wards), cost

Opioids (1,4,6,8,10)

Opioids is the mainstay of postoperative analgesic regimens. Numerous studies have shown, however, that patients often receive inadequate analgesia with opiates alone, particularly when prescriptions encourage assessment of pain by observers rather than by the patients themselves. Morphine is the prototype opioid agonist against which others are compared. Opioid receptors are found throughout the body, most notably in the midbrain and the dorsal horn of the spinal cord. Receptors are also found in smooth muscle, the musculoskeletal system and in sympathetic and sensory neurons. Opioid receptor binding inhibits adenylate cyclase activity via G proteins, causing hyperpolarization and discharge suppression in target neurons.

The main beneficial effects of opioids are analgesia, sedation, anxiolysis, cough suppression and the relief dyspnoea. High-dose opioids blunt the stress response to surgery. Common side-effects of opioids include respiratory depression, tolerance, nausea and vomiting. Specific opioid receptors are found in the vomiting centre. Opioids delay gastric emptying, decrease lower oesophageal sphincter tone, increase gastric secretions and cause constipation. Drug dependence seldom occurs in acute pain control. Pruritus and urinary retention are usually confined to epidural and spinal opioids. Antiemetics commonly used to avoid opioid related nausea and vomiting are prochlorperazine, metoclopramide, ondansetron.

Patient – controlled analgesia (PCA) (1,3,9,10)

This technique allows small does of analgesic drugs (usually morphine or fentanyl)

to be administered (normally intravenously) by patients. It relies on a specially programmed syringe driver, which delivers small boluses of opioid when the patient presses a button. To prevent overdose, a 'lockout' period follows delivery, whereby depressing the button has no effect. For a 70 kg. otherwise healthy patient, a typical bolus dose would be 1mg with 5-minute lockout period. These parameters are set by the anaesthetist and cannot be altered by the patient or relatives. This technique is suitable for treating severe breakthrough pain and, to a certain extent, background pain. A background infusion can be set, but this increases the risk of respiratory depression. The concept of patient controlled devices has now extended to epidural analgesia

Paracetamol (3,4,6,8,9)

This has central analgesic and antipyretic effects by mechanisms that are unclear. It is usually classified with NAIDs, as it has similar effects. However it is not possible to demonstrate inhibition of the enzyme cyclooxygenase with paracetamol in vivo or in vitro. Paracetamol is effective for mild to moderate pain. Paracetamol is cheap, safe well absorbed, is not gastric irritant and adverse reaction are very rare. The usual dose is 10 mg/kg 6 hourly. It is, however, very dangerous in overdose: 5-7 g can produce fatal hepatic necrosis.

NSAIDs (3,4,6,8,9)

These are highly effective for moderate to severe inflammatory pain, either as a single agent or in combination with an opioid. The analgesic action of NSAIDs results from inhibition of cyclooxygenase-1 (COX-1), to some extent. COX-1 is the constitutive enzyme that produces prostaglandins that regulate renal blood flow and platelet function, and is responsible for maintaining bronchodilatation and the reduction of the protective mucus layer in the gut wall. Inhibition of the COX-1 isoform causes side-effects, including renal damage, gastritis and gastric ulceration, coagulopathy and bronchoconstriction. Inhibition of the other isoenzyme, cyclooxygenase 2 (COX -2), decreases the synthesis of prostaglandius in the periphery which stimulate nociceptors. Many pharmaceutical companies are currently marketing specific COX-2 inhibitors (eg: celecoxib, rofexoxib) and have shown comparable efficacy with traditional non-selective NSAIDs, but significantly reduced levels of gastrointestinal haemorrhage. However, COX-2 does seem to play a constitutive physiological role in regulating renal blood flow and whether COX -2 inhibitors are associated with fewer adverse effects on the kidneys is uncertain.

Contraindications to NSAIDs :

Thrombocytopenia, Aspirin – sensitive asthma, Peptic ulcer, Renal failure, Hypovolaemia, Hepatic failure.

Tramadol (3,4,5,)

Tramadol is used commonly now. It is synthetic agent that is equipotent with pethidine and has both opioid and non-opioid analgesic actions. It has a relatively low affinity for μ receptors and little potential for abuse. It causes less respiratory depression than classic opioids but nausea is still problematic. Non opioid analgesia results from brain and spinal cord noradrenaline re-uptake inhibition, and also serotonin release. Tramadol should be avoided in severe renal damage, and the dosage interval extended in renal impairment. It can be given orally, rectally or parenterally. Tramadol should not be prescribed to patients taking monoamine oxidase inhibitors and patients who are having a history of epilepsy.

Epidural analgesia (1,,3,4,9)

Insertion of a plastic catheter into the epidural space is a common method for the delivery of local anaesthetics to segmental spinal nerves for perioperative analgesia. Because the spinal cord also contain opioid receptors, this allows the additional delivery of opioids directly to these receptors, with a tenfold increase in potency compared with intravenous delivery. Pulmonary and cardiovascular posto perative complications are reduced significantly following thoraco-abdominal epidural

analgesia. High quality targeted analgesia can be achieved with a significant reduction in the opioid related side-effects of respiratory depression, nausea, vomiting and dedation. Epidural analgesia is most commonly provided by a continuous infusion of low concentration bupivacaine (0.066-0.125%) with or without opioids (typically fentanyl, 2μg/ml, or diamorphine/ morphine, 100 2μg/ml). infusion rates (5-20 ml/ hour) depending on the location and size of surgical incision (the number of dermatomes covered) and the position of the epidural catheter.

Complications of epidural analgesia

- Hypotension
- Profound motor block
- Respiratory depression
- Nausea and vomiting
- Urinary retention
- Pruritus

Advantage of epidural analgesia

- Improve postoperative respiratory function.
- Reduces the stress response to surgery after lower abdominal and lower limb surgery (minimal effect after upper abdominal or thoracic surgery).
- Minimize the hypercoagulable state after major surgery; there is a reduction in deep venous thrombosis and pulmonary embolism after hip surgery.
- Reduced intraoperative blood loss during surgery on the lower part of the body.
- Improves postoperative gut function, facilitating early enteral nutrition.

Spinal and Epidural Opioids (1,8, 5,)

Currently this method is gaining popularity. Placement of preservative free opioids (eg: morphine 200μg) taken up in the region of the substantia gelationsa. After epidural administration of opiod, the drug diffuses through the dura into CSF and produces analgesia by the same mechanism as the associated with subarachnoid injection. However, there is more rapid uptake of opioid into the circulation via the rich network of blood vessels in the epidural space, Consequently, there is a rapid increase in both CSF and blood concentrations of the drug after epidural administration.

The more highly lipid-soluble drugs (e.g.fentanyl) have a more rapid onset and a shorter duration of action. The less lipid-soluble drugs (e.g. morphine) have a slower rate of onset of action, in addition there is a greater dispersion within the CSF due to reduced uptake into spinal cord and the drug may reach the medulla to cause delayed ventilatory depression.

Nerve or Nerve plexus block (analgesia)

As in epidural analgesia, catheter placed closer to the nerve or nerve plexus and local anesthetic agent given as continues infusion or blouses.

Non- pharmacologigal methods (1,2,4)

Find the most comfortable place for the patient with adequate ventilation, optimum temperature desired by the patient, a comfortable bed, reassurance, tender approach by the medical staff and also some entertainment facilities e.g: Television will reduce patient discomfort. The extra comfort of a preferred by-stander at the bedside would also significantly contribute to this method. Psychological and physical interventions can be used as adjuncts to pharmacological approaches. Ensuring that patients receive information about the intended procedure can reduce subsequent pain and distress. Transcutaneous electrical nerve stimulation and electro-acupuncture can reduce nausea, vomiting and opioid consumption after abdominal surgery.

Conclusion:

In conclusion, the writer of this article is of the view that various modern methods of post operative pain management such as providing effective analgesia for longer periods of time with as few drug-related or procedure

related side-effects as possible should be more frequently used with a view to minimizing pain in suffering patients. Sufficient attention and caution should also be taken to ensure that infections resulting from indwelling catheters and bleeding risks are minimal. It is also proposed that a set of guidelines should be adopted in each and every institution to be followed by a pain team consisting of a pain physician, medical officers and nursing officers in collaboration with the surgical team. This team should also extend their services in the labour room in order to obtain the maximum cooperation of the mother during delivery by significantly reducing labour pain.

Health authorities should extend their fullest cooperation in this regard by identifying and appointing such teams while also providing required technology and equipment for implementing this all important medical facility which has been somewhat neglected to a greater extent in developing countries such as Sri Lanka.

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Role of Family in Delivery of Effective Mental Health Service

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Delivery of effective mental health services is a challenge in any society. Many different models have been tried in developed countries with varying degrees of success. Involving the families in care is one of them. Attempts to involve the families in the care have been tried elsewhere. It was hoped that by including the family in the care process the long term treatment outcome would be better.

Though families could play different roles with regards to the many mental illnesses, only serious mental illnesses after contact with services and the role families could play in this clinical context is considered for this paper.

High service users are clients who need high input from the services. Often they need frequent admissions to inpatient mental health units. Out come of the disease process itself is poor in these instances. This leads to poor quality of life for the client. It also adds to the work load of the inpatient units. In addition to this it demoralizes the staff and leads to overall drop in quality as well.

Two different service delivery models have been tried to reduce the load of high service users.

1. Community mental health services – these are often found in developed countries and are staffed by dedicated trained teams that care for the patients in the community. They are found in a limited manner in some developing countries as well. These are expensive to set up and run and need highly trained staff in the community.

2. Using the existing informal support systems – families and other support systems where available could be used as extensions of the mental health delivery system. They can be trained in assessments, monitoring and crisis management. This is quite feasible in developing countries as family systems and functional. The costs are low in this model.

There are some common factors which help to identify high service users. The disease factors are important. But there are some factors other than disease factors which predict high service use. They are

- poor family support
- poor insight
- poverty
- difficult access to services
- poor knowledge and attitude of family

Of the factors listed above two involve the family. This shows that the family factors have a strong influence in pushing clients in to high service user category.

Furthermore, consumer reports indicate a strong reliance on sources outside the mental health system for many of the community support service needs, interpersonal needs, and crisis related needs. Most of the identified informal resources in this study were family and friends. However in the same study when the case mangers were interviewed they thought the formal services were the main support (Crane Ross et al 2000).

Though there is much evidence to support as in the above mentioned study, many clinicians rarely included these methods in their professional repertoires (Amenson, Leberman Psch services 2001). These same authors note that the family education must be included in the whole spectrum of services including the clinic, community support program, and hospital. Furthermore in the same study they showed intensive training over many months led to implementation of several programs.

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Carp in 2000 identified four stages in the relationship between care givers and patients. They are

1. Before diagnosis the family experiences anomie. They do not understand the patient's behavior.
2. Once the diagnosis is made this provides a medical frame work through which they get feelings of hope and are able to show compassion and sympathy.
3. Once they realize that the mental illness may be permanent it ushers in the more negative feelings of anger and resentment.
4. The care givers eventually recognize they cannot control the family member's illness and gradually decrease their involvement.

It is important to involve the family as early as possible and prevent the last few steps from occurring and keep the family engaged. There are some aspects in the service provision and other factors that aggravate the problem and widen the gap between the patient and the family. They are

1. Families are often marginalized by service providers. Wynaden in 2005 identified the following components to be important
   a. Service providers often do not listen to carers views
   b. Providers often do not make an effort to explain to the family
   c. At times blaming relatives for the illness and relapse
   d. Increased frustration and resentment of staff
2. Families often do not understand the patients' behavior.
   a. As the families often have alternate beliefs based on the local culture
   b. Carers are often included in the delusional systems and this causes hurt and anger in them
   c. They can become angry due to any violence associated with the illness
   d. Adequate space for ventilation of feelings is not provided and families are pushed into carer roles too early
   e. Proper explanations and skills are not provided to the family members.
3. patients often feel neglected by families
   a. Relatives often have difficulties in visiting the hospital to see the patient. This could be due to distance, staff attitude that creates a sense of unwanted ness.
   b. Often the last contact between the patient and family would have been an unpleasant experience for both
   c. At times the families could have been responsible for the patient's involuntary admission.
4. Families often do not have easy access to service providers

Considering the above factors, a systematic effort was made to involve the families more in the care of the mentally ill in the Batticaloa hospital. This was made from the initial contact onwards to maximize their involvement in planning and delivering care. To get the full benefit of family involvement, the following are considered important

- The family has to be supported as they would have undergone quite a stressful period prior to accessing care
- Attitude of the family towards the person and the disease has to be positive. The team should play an important role in achieving this.
- The family must be valued as an important partner by the professional team caring for the patient
- The family's participation should be there from the initial period.

The approach was to interact with all the systems that supported or interacted with the patient. This would mean the mental health team will work with the nuclear family, extended family, and the community where necessary. In addition to this the relationship that was built was not a didactic relationship between the patient and the provider but a triangular relationship where the three points of the triangle were the patient, family, and the provider. This type of approach has been shown to produce better patient outcome even though

mental health professionals do not often collaborate with families (Kaas 2003).

In an attempt to achieve the above the following measures were adopted by the mental health team in the hospital.

Encouraging a bystander for all patients admitted to the inpatient unit.

From the time the acute unit was set up the staff has been insisting a relative should stay as a bystander for all patients. Most families did not find this too difficult. Even cross gender relatives were allowed without a problem. However the team did not encourage the practice of paid bystanders because the reason for having a bystander would be lost. An attempt is made to create a suitable atmosphere where the family members could feel at home and also feel they are part of the treatment team. Even more than one bystander is allowed when they request. Even children could stay over in the ward if the family finds it difficult to arrange care at home.

This system of encouraging family members to stay has many benefits. The incidence of abuse which is always a possibility in mental health units becomes much less. Family is more aware of the disease and the treatment. They also see other patients recover and leave the ward. This gives them hope. They also see the gradual improvement in the patient and are in a better position to take the patient at the time of recovery - early. By participating in the ward culture they gain much knowledge about mental illnesses and the ways of managing them. They also develop informal networks with other families. This arrangement also helps the staff to study the family. They are in better position to plan the care package for the patient.

Staff attitude to family

The staff developed a positive attitude towards family when they realized the important role family could play in the treatment process. Any way, in all our lives in this part of the world families play an important role when compared to western world. This too might have contributed to the positive attitude developing among the staff.

Telephone facility for families and patients

This facility has been available at the mental health unit for over three years now. Patients and bystanders can call their homes or any other person from the ward. Similarly they can also receive calls from outside from friends and relatives. About 30% of the patients use this facility daily. This helps to improve the link between the family and the patient.

In addition the unit provides a 24 hour hotline service. Patients and relatives can call for advice and help. This is handled by the nursing staff in the unit. Around 4 calls per day are received on a regular basis at the unit on this line.

Visiting restrictions

Usually there are restriction on visiting relatives and friends admitted in hospitals. This could be a limitation on the number of persons visiting at a time and the time allowed for such visits. However to encourage links between the patient and the family there are no restrictions on the number of persons and the time to visit. Anybody can visit a relative in the mental health unit at any time. This practice encourages more visiting by relatives. This also gives an opportunity for doctors to interact with relatives. It is hoped by improving the link between the patient and family that the family would be able to take an active role in care after discharge.

Family meetings

These are a regular feature in the mental health unit. These meetings are held for most patients. Usually 5there two meetings held for each patient. The first one is often held a few days

after admission. This is to gather information and to get to know the family better. This gives a lot of insight into the family dynamics to the staff of the unit.

The second family meeting is held just before discharge. In this meeting the diagnosis, treatment plan, the responsibility of each member, early diagnosis, arrangement for follow up are discussed. This improves the participation of family members in the care of the patient after discharge from the in patient unit.

There are other possible strategies for involving the family that have not been attempted by the mental health unit in Batticaloa. Having individual family units where the whole family could stay is one, setting up community support groups who would visit the patients and the families on a regular basis to provide support, family group training sessions where members of the family get trained in mental health and other relevant areas to improve the knowledge and skills to handle the patient among other things. Having a rapid response team that will be able to visit homes in a crisis too would be helpful. Respite care can be offered to provide some relief for patients and their families.

Trans Fatty Acids (TFA): A man made menace

Murali Vallipuranathan*

Introduction

TFA are unsaturated fatty acids with at least one double bond in the *trans* isomer configuration[1] (figure 1). They can occur naturally in the milk and body fat of animals at a level of 2-5% of total fat[2]. These natural TFA have not been demonstrated to be harmful[3]. Most TFA consumed today, however, are synthetic TFA which can be found at a level of up to 45% of the total fat of the food source such as margarine or vegetable shortenings[3]. Synthetic TFA are produced by the industry by the process of hydrogenation of plant oils, a technique developed about 100 years back[4]. TFA have higher melting temperatures and less prone to rancidity. Using TFA in the manufacturing of foods helps foods stay fresh longer, have a longer shelf life and have a less greasy feel. Because of these reasons TFA are preferred and manufactured in large scale by the industries.

Consumption Pattern

Though margarine has been an important source of **TFA** in the Sri Lankan home made food, fast foods prepared in restaurants such as French fries and commercially baked foods such as cakes, crackers and cookies can contribute to considerable amount of TFA.

Vegetable fats were generally considered healthier than animal fats until eighties[3]. Consequently unsaturated fats of margarine were considered healthier than the saturated fats of butter at that time. This resulted in excess margarine consumption over butter intake between 1950 and 1990[3]. This belief and the consumption pattern were, however, reversed in nineties when the harmful effects of TFA were gradually revealed.

Adverse Effects

The adverse effects of TFA on serum lipid levels are now firmly established by a systematic review of 12 randomized control trials[1]. TFA increase the harmful Low Density Lipoproteins (LDL) and triglycerides while reducing the beneficial High Density Lipoproteins (HDL)[1]. TFA are worse than the saturated fatty acids because saturated fats increase the HDL levels and decrease the ratio of total to HDL cholesterol which is a more specific risk marker of Coronary Heart Disease (CHD)[5] while TFA reduce the HDL levels and increase the risk ratio for CHD.

In addition to the adverse effect on lipid profile and risk of CHD, TFA are incriminated in several other diseases including Alzheimer's disease[6], type 2 diabetes[7], omega-3 essential fatty acid deficiency[8], breast cancer[9] and poor foetal[10] and early infant growth[11]. The evidence however, needs to be strengthened by future studies. Intake of TFA is associated with inflammation and endothelial dysfunction which is evident by associated increasing levels of Tumour Necrosis Factor (TNF), interlukin-6 and C Reactive Protein (CRP)[12]. Since TFA is implicated in the poor growth and development of foetus and infants and because its presence in the breast milk correspond to the dietary TFA of nursing mothers[13], TFA

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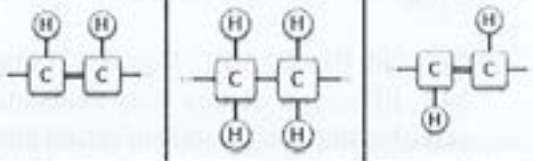
intake during pregnancy and lactation has become a serious concern

Preventive Measures

Following these negative findings, food manufacturers in several countries have been required to list TFA content on nutrition labels and limit it to acceptable levels[2]. This requirement has led to little or no TFA by several manufacturers. As an additional measure to control TFA in unlabelled foods, use of TFA has been banned in restaurants in several cities[4].

The new labelling regulations in Sri Lanka have made it mandatory to declare the oil, oil mix and fat content of cooking oil and margarine. However, there is a need to increase awareness among the general public and to educate the consumers on the harmful effects of the TFA especially because Sri Lankans are part of the South Asian ethnic group who are at high risk of developing CHD[14]. Especially margarine and other packaged food should be clearly labelled with their fat composition by the industry. Consumers should be advised to examine for their TFA content before consumption. Acceptable TFA content on the total fat content for the margarine and vegetable oils could be at 2% and for all other food it could be at 5% [2]. Since unpackaged baked goods, pub and restaurant food, and take-away / fast food do not have labels, consumers should be informed of the possible risks and discouraged from taking these foods. This is particularly important in the background of changing life styles, growing fast food culture and the associated increase in the prevalence of obesity[15],[16].

Figure 1

Diagram of the molecular structure of different fatty acids		
Saturated fat	***Cis*-unsaturated fatty acid**	***Trans*-unsaturated fatty acid**
		
saturated carbon atoms (each with 2 hydrogens) joined by a single bond	unsaturated carbon atoms (each with 1 hydrogen) joined by a double bond. *Cis* configuration.	unsaturated carbon atoms (each with 1 hydrogen) joined by a double bond. *Trans* configuration

Courtesy: Wikipedia, The free encyclopaedia (http://en.wikipedia.org/wiki/Trans_fat)

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HYPERTENSION IN SRI LANKA

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C.J.Walathara%

Mr R de S a 49 year professional while addressing a meeting suddenly felt dizzy and he found it difficult to speak. He tried to stand up but his left leg collapsed under him. His colleagues took him to hospital where he was found to have a left hemiplegia affecting mainly his arm and leg. His Blood Pressure was 210/108. A CT scan revealed a small deep haemorrhage in the internal capsule of the right hemisphere. Five years previously he had been diagnosed as having Hypertension and was treated with a Calcium channel blocker but he gave up his medication after two years because he felt well and his Blood Pressure had returned to normal. His doctor had not adequately emphasized to him that he should continue medication for life. Probably there is not a single medical practitioner in Sri Lanka today who has not seen a patient, either during medical practice or during training, with a somewhat similar story.

As it is with diabetes mellitus, better manage ment of hypertension and its associated causative factors seems to reduce its com plications and deaths. This has happened in the USA[1]. The complications include strokes , ischaemic heart disease, heart failure, chronic renal failure and peripheral and retinal arterial diseases in addition to the mental anxiety caused to patients by the knowledge that they have the disease. In Sri Lanka the overall hospitalization rates(per 100,000 population) for hyper tension and associated diseases is rising dramatically. It rose from 180 in the year1975 to 800 in the year 2002[2]. Similarly the hospital death rates(per 100,000 population) for hypertension rose from 14 in the year1975 to 22 in the year 2002[2]. Few reliable population prevalence studies for hypertension have been done in Sri Lanka. In the Central Province the estimate for prevalence was 17% for a population of males aged between 35 to 59[3]. In the Western, North Central, Southern and Uva Provinces the estimate was 18.8% for a population of males between 30 and 65 years; the figure for females was slightly higher at 19.3%[4]. This data indicates that about 1 in 6 adults above the age of 35 have hypertension. In the USA about 1 in 4 (24%) of the adult population has hypertension[9]. Ischaemic heart disease and cerbrovascular disease, both of which have hypertension as a risk factor, were ranked first and fourth respectively among the leading causes of hospital deaths in Sri Lanka[2].

These statistics indicate that hypertension is a major public health problem in Sri Lanka which requires special attention by the Health Ministry and also indicate the need for more research into this disease with particular reference to its management and prevention in the Sri Lankan cultural context.

Study Population

With the objective of improving the care of hypertensive patients, the University Medical Unit of the Peradeniya Medical Faculty has conducted a weekly Hyperten sion Clinic for the past 29 years. The population attending the clinic has varied over the years and currently stands at around 2000 with a weekly clinic attendance rate of about 200. A fair proportion of patients have attended the clinic for a minimum of 5 years and there is one patient who has regularly attended the clinic for the past 29 years since the Clinic's inception in 1978. In 1978 the only reliable antihypertensive was the adrenergic neurone blocker Guanethidine which had very unpleasant side effects.

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Management of patients

The patients have been managed mainly on the guidelines issued by the British Hypertension Society(BHS). These guidelines have changed over the years. In 1999 the BHS recommen dation was to initiate antihypertensive therapy when there was a sustained systolic pressure of 160 or over and a diastolic of 100 or over[5]. In 2004 the relevant figures were changed to 140 and 90[6] because research evidence showed that high systolic pressures were as damaging as the high diastolic pressures. Drug treatment of these patients in general followed the ABCD algorithm advocated by the BHS[6]. This algorithm was based on the theory that hypertensives can be categorised into those having "high renin" and those having "low renin". For those with high renin the renin-angiotensin system(RAS) could be blocked with ACE inhibitors or Angiotensin receptor blockers (A) and beta blockers (B) while for the low renin group Calcium channel blockers(C) and diuretics (D) should be used. In general, patients *younger* than 55 years fall into the high renin group while those *above* 55 fall into the other group. Of the secondary causes of hypertension, women on oestrogen containing oral contraceptives are advised to seek an alternative form of contraception.

Research questions

With this large amount of patient data available in the Clinic we recently identified the following research questions that could be answered in relevance to the disease in the form it prevails in Sri Lanka. However the limitation of resources has delayed work and the relevant analyses. The results presented below answer only some of the questions and that too in a preliminary format.

1. Is the life expectancy of treated hypertensives different from that of the general population?
2. What is the average age of onset of hypertension?
3. Is there a gender difference in the prevalence of hypertension?
4. Are women who have Pregnancy Induced Hypertension (PIH) more liable to hypertension in later life?
5. What is the risk of developing hypertension in the presence of a family history of hypertension or diabetes?
6. What is the prevalence of the Metabolic Syndrome in patients with hypertension?
7. What are the actual drug prescribing patterns at the Hypertension Clinic?

Results

The average age of onset or rather the age at which the hypertension was first detected was 54 years and appears to be the same in both genders. The male/female ratios of those attending the clinic varied over time from 58/41 in 2004[8] to 30/70 in the current Clinic population. These figures do not reflect the gender prevalence ratios in the general population for which a community based study is required.

A family history of hypertension or diabetes appears to be a significant risk factor for hypertension(relative risk =1.46; comparing clinic patients and controls). It was a family history of hypertension which influenced the higher prevalence of hypertension in those women who had at least one episode of PIH[7] PIH does not appear to be a risk factor in the subsequent onset of hypertension in women[7].

As regards prescribing patterns in the year 2004 Gooneratne[8] who analysed a sample of 642 Hypertension Clinic patients showed that 70% of the clinic patients were receiving a single anti-hypertensive drug The rest were on a combination of a minimum of two drugs,

majority of whom were on a combination of calcium channel blockers(C) and diuretics(D). Females and patients under the age of 60 who were on ACE inhibitors(A) showed the best reduction of their blood pressures.

Sustained hypertension secondary to other demonstrable causes - renal disease, renal vascular disease, Coarctation of the aorta , primary hyperaldosteronism, Cushing syndrome, oestrogen use- were not detected in the Clinic. There was a single patient with phaeochromocytoma whose hypertension continued to be sustained even after surgery

Conclusions

There is now ample evidence for the fact that hypertension, like tuberculosos, is an ever increasing major public health problem. The public and private cost of treating strokes and other consequences of hypertension must be enormous. Major part of these consequences can be prevented with early detection, improved management together with better public and patient education as was shown in the USA[1].

More needs to be done on the patient data available in the Hypertension Clinic. In an effort to improve patient care a structured format for recording data from hypertensive patients has been developed and will be tested for the practicality of its use by doctors. This will be a positive step towards imple menting Health Information Technology (HIT) for improving the health care given to these patients.

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AN AUDIT ON THE HISTOPATHOLOGY REPORTS OF THE MAJOR SURGERY PERFORMED AT OBSTETRICS & GYNAECOLOGY UNIT (WARD 3) OF GENERAL HOSPITAL (TEACHING), BATTICALOA.

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Objective:

Analysis of the available histopathology reports in order to ascertain

1. Pathology for which the surgeries were performed
2. Major indications for surgery

Materials and Methods:

Histopathology reports available at the ward 3 of General Hospital (Teaching) from January 2002 until December 2006 were analyzed. Major indications mentioned in the report were taken for indications and major pathology mentioned in the report as conclusion was taken for pathology. More than one indication or pathology was considered as mixed indications or pathology. Percentage of mean was used for analysis.

Results:

A total of 203 reports were analyzed. 131 (56%) had uterine Pathology; 60(38%) had ovarian pathology; 12

had pathology in the Fallopian tube. 84 out of 113(74%) uterine pathology had fibromyomata and no pathology was detected in 16(14%) cases.Out of 60 ovarian pathology, 26 (43 %) had cystadenoma;14 (24.5%) had Teratoma and corpus leuteum was found in 5 cases(9.5%). Out of 12 cases with tubal surgery, 10 were performed for ectopic pregnancy.

As for the indications for surgery, menorrhagia or abnormal menstrual bleeding was found in 67 cases; abdominal pain in 26 cases and abdominal lump in 90.

Conclusion:

This survey highlights that the major indications for Major gynaecology surgery were abdominal lump and abnormal menstrual. However normal findings at histopathology were found in about 10% of cases which may be within acceptable proportion. A significant finding is the incidence of teratoma of about 25% of the ovarian pathology in this survey.

Introduction

Women with diseases in their Reproductive Organs generally present with a handful of symptoms. They present with abnormal menstruation, vaginal discharge, abdominal pain and abdomino pelvic lump. On several occasions they present with combination of these symptoms.

Surgical procedures take an integral part in the management of these clients. These procedures generally give the diagnosis of the conditions, staging the malignancy and also aim at providing cure. More than the naked eye appearances, histopathological evaluations hold an important role in providing adequate information on the disease condition and its management. It is of paramount importance that the health care teams should survey their performance as to ascertain that adequate evidence is provided to ensure their practices.

An audit is carried out on the histopathology reports of the major surgical procedures carried out at the Gynaecology cum Obstetrics Unit

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(Ward 3) of General Hospital (Teaching), Batticaloa during January 2002 until December 2006 with objectives of identifying the prevalence of chief presenting features requesting surgery and major Gynaecological pathology reported.

Materials & Methods

Histopathology reports available at this unit were taken for analysis. Following information was obtained from these reports;

1. Presenting feature as indication for surgery
2. Histological Diagnosis mentioned as conclusion in the report

When more than one pathology is reported from the specimen sent, decision to identify the chief pathology was made in accordance with the presenting feature (Eg : Presence of Endo metriosis of ovary and fibromyoma of uterus, the diagnosis of fibromyoma was made when the indication is abdomino pelvis mass). Similarly in the case of more than one presenting feature, the chief presenting feature was taken in accordance with the pathology. Reports with mixed presenting features and mixed pathology were excluded in this study. Data obtained were processed and analyzed.

Results

A number of 203 histopathology specimens were analyzed. Table I showed the SIH where the lesions were found Table II, III & IV show the distribution of uterine, ovarian and tubal pathology respectively. Table V describes the presenting features.

Among the uterine lesions, Fibromyoma was the chief pathology (64%) for which surgery was performed. In 16 cases no pathology was detected. Among ovarian pathology, Cystadenoma was the major pathology. Teratoma was found in 14 cases gives the incidence of 23% of all ovarian tumours. Corpus leuteum cyst was found in 5 (8%) cases. Among the 12 cases who had tubal surgery, 10 were performed for ectopic gestation. Among the presenting features abdomino pelvic lump (44%), followed by abnormal menstruation (33%).

Discussion

Pelvic surgery may be said to have begun when Ephraim Mc Dowell in the USA successfully removed a large ovarian tumor from a woman. The operation was performed on the Christmas morning in 1809. This was done before the era of anesthesia or aseptic techniques. This woman made a rapid recovery from surgery and cured of her illness. Myomectomy was performed in 1840, before hysterectomy (in 1843)[1].

The rapid developments of anesthesia, surgical technique, asepsis, antibiotics, blood transformation etc. have made the surgery safe.

Table I-Distribution of Pathology (n -203)

In Ovary	60	30%
In Uterus and Cervix	131	64%
In Fallopian Tube	12	6%

Table II Distribution of Uterine Pathology

Fibromyoma	84	64%
Adenomyosis	18	14%
Metaplasia cervix	10	8%
Carcinoma cervix	02	1.3%
Endomtritis	01	0.7%
Normal	16	12%

Table III Distribution of Ovarian Pathology

Cyst adenoma	26	43%
Teratoma	14	23%
Endometriosis	09	15%
Corpus Leuteum	05	8%
Carcinoma	04	7.5%
Others	02	3.5%

Table IV Distribution in Pathology in Fallopian Tube

Ectopic Gestation	10	83%
Salpingitis	01	8.5%
Fimbrial cyst	01	8.5%

Table V Presenting Features Indicating in Surgery

Abdominal pain	26	13%
Abdominal lump	90	44%
Abnormal Menses	67	33%

Table VI Incidence of Germ Cell Tumours (GCT) in Sri Lanka [5,6]

	Total No. of Ovarian Neoplasma GCT
Attygalle & Thavarasa 1985 (10 Years Study) 84 (13.4%)	624
Jeyaweera 1990 (4 Year Study) 190 (18%)	1056

In this audit it was revealed that many surgeries were performed for uterine fibromyoma or large ovarian mass which were palpable abdominally. However as for the presenting features, it was the abnormal menstruation especially menorrhagia, that indicated surgery in 33% of cases. Clinical assessment as well as ultrasonography provides useful information. Ultrasonography is of use in finding the size of the uterus, texture of myometrium & endometrium, presence of polyps and assessment of lumps in the genital organs [2,3].

It should be worth to note that 16 (12%) cases who had Hysterectomy did not have any pathology. Hysterectomy has a devastating psychological impact on the woman. Alternative form of treatment such as Thermo Cervical resection of endometrium and more recently Thermal Balloon, Microwave Endometrial ablation, hydrothermal ablation prevent hysterectomy and improve quality of life of woman [4].

It should also worth to note the significantly high incidence of Teratoma in our study (23%). Teratoma is a Benign Germ Cell Tumour (GCT) of the ovary. Reported incidence of GCT in Sri Lanka via various published and unpublished studies was under 20% (4 yrs) (Table VI).

This audit also has revealed shortcomings. It is only the reports available in the unit that have been included and not all the major Gynaecology surgery performed during the study period was analyzed. This indicates that proper record keeping system should be developed.

Audit of this nature will give us Epidemiological data of the incidence of the diseases so that regional as well as national statistics on the incidence and prevalence of various conditions can be made. These statistics will enable to identify priority areas and conditions & to formulate management protocols.

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PREFERENCE OF ORAL EXAMINATION (VIVA VOCE) AS AN ASSESSMENT TYPE IN THE CLINICAL TEACHING AND LEARNING IN THE MEDICAL SCHOOLS IN SRI LANKA

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Introduction

Evaluation is concerned with the application of its findings and implies some judgment on the effectiveness, social utility or desirability of a product, process or programme in terms of carefully defined and agreed-upon objectives or value.[1] Assessment is a fact-finding activity that describes the conditions that exist at a particular time.[1]

There are mainly three methods of assessment, i.e., written, observation and oral methods. The written or 'Pen and Paper' method includes essay and multiple-choice questions. The observation method is used in clinical and practical examinations. The choice of examination method depends on the purpose of evaluation, the domain of educational objectives to be tested and feasibility, validity and objectivity of the method.[2]

Oral Examination (viva voce) is traditionally an integral part of the evaluation in preclinical, Para clinical and clinical phases.[2] Nevertheless education authors nowadays criticize and try to expel this method of assessment because it involves personal contact between the examiners and the students. It also suffers from serious limitations such as Questions are not standardized as regards to the level of difficulty, lack of objectivity and time consuming in nature.

Objective

The main objective of this study is to find out the preference of Viva voce as an assessment type in clinical teaching and learning in Sri Lankan Medical Schools.

Methodology

This study was conducted by giving the interview administered Questionnaires to 16 clinical teachers from five Medical schools in Sri Lanka. They were requested to select the different clinical skills for which viva voce is the preferred choice of assessment. The collected data were then analyzed.(see table)

Component of clinical skill	No. of preference	Percentage (%)
History taking	02	12.5
Examination skill	-	-
Communication	14	87.5
Handling Emergency	10	62.5
Critical thinking	14	87.5
Research	14	87.5
Management/Protocol	-	-
Team work	07	43.75

Table: The component of clinical skills and the number of candidates selected the viva voce for their assessment.

Results

Out of 16 candidates 14 of them preferred viva voce for the assessment of communication, Critical thinking and Research. Ten of them preferred it for handling emergency. To all of

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them it was not a preferred choice for the assessment of examination skill and Management/Protocol.

Discussion

The main purpose of designing a system of student assessment in medical schools is to make the assessment procedures congruent with educational goals and instructional principals. Different authors, including great reformers in medical education in the early part of last century, emphasized that student's learning was largely influenced by examinations.[3,4]

The Student Assessments are performed at two levels,

1. Formative Assessment, which is performed during the course of study.
2. Summative Assessment is performed at the end of the course of study.

This analysis however is done irrespective of this difference.

Viva Voce has its shortcomings. The examiners are free to place any questions within the frame work of the study, and expect the form of answer which has already been synthesized by them. The students too, if failed the examination, may blame the examiner for asking "Difficult Questions".

In this study 87.5% of the Clinical teachers preferred viva voce for assessing certain clinical components. All those components are important since they deal with communication skills, individualized care & research.

Viva voce is still a preferred choice of assessment of emergency care and team work. This indicates that this method of assessment has gained its place. The positive features for this type of assessment can be that it is an easy method for organizing questions and does not involve much preparation, when compared to the much spoken method OSCE.

Conclusion:

Our study reveals that for many clinical teachers viva voce is a convenient method of assessment in clinical teaching and learning. This method should be modified in a schematic way with well structured questions and involving a number of examiners whenever possible, so that bias in its performance can be eliminated.

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Nursing Education at Eastern University Sri Lanka

Rajendram G.F.[1]

In 1996, a proposal was sent to the University Grants Commission by the Eastern University Sri Lanka to commence a B.Sc. programme in Nursing. The University Grants Commission did not consider facilities at EUSL adequate for commencing a B.Sc. Nursing programme but recommended that EUSL could negotiate with the Ministry of Health regarding commencing a programme of Post Basic Diploma in Nursing (PBDN). Since the PBDN course was conducted by the Health Ministry mainly in Sinhala and the candidates from North and East were finding it difficult to follow the programme, the permission was readily granted. The medium of instruction of PBDN at EUSL would be English.

The course was advertised and candidates with a minimum of four year experience in Nursing were selected on the basis of a written examination to test their knowledge of the subject as well as their competence in English. The syllabus from the Colombo School of Nursing was followed including the Clinicals which were carried out in the Teaching Hospital, Batticaloa. Twenty-five students were selected and followed the course from 1998. They successfully completed their course in 2000.

When the course was advertised a second time, the Ministry of Health requested EUSL to delay recruitment until they send names selected by them for the PBDN course. Subsequently a list of 30 students selected by the Ministry of Health was sent to EUSL and the candidates were admitted to follow the course. The course was conducted from 2003. Successful candidates passed out in 2004.

Funds required for conducting this programme were initially provided by the Canadian International Development Agency (CIDA) including funds for postgraduate training of Rev. Sister Josepha Joseph, Coordinator of the Nursing programme, to obtain an M.Sc. in Nursing at St. John's Academy of Health Sciences in Bangalore University from 2000 to 2002.

In 2001 a collaboration was signed between EUSL and the University of Tromso, Norway, which included assistance in setting up a Faculty of Health Care Sciences. A delegation from the Centre for International Health of the University of Tromso, Norway, visited EUSL in April 2004 and as part of their collaboration invited a delegation of the EUSL Medical Faculty Committee to visit the University of Tromso in October the same year.(1) From 2005, the Centre for International Health of the University of Tromso obtained a grant from the Norwegian Red Cross to assist EUSL in setting up an external B.Sc. degree programme in Nursing, a two year programme to upgrade the diploma holders in Nursing to the four year B.Sc. level. Assistance included putting up an additional floor on the North wing of the Nursing Unit and setting up a Clinical Skills laboratory. Assistance will also be forthcoming in the training of Nurses in computer skills by providing computers. Air-conditioning and sound-proofing of all three floors of the north wing are also under consideration.

Nursing is part of the Department of Supplementary Health Sciences in the Faculty of Health Care Sciences, the first faculty of its kind in Sri Lanka. The external degree programme is innovative since staff could be recruited from the graduates of this programme to conduct the Nursing studies when the four year Nursing students are admitted to EUSL in 2008.

[1] Professor and former Vice-Chancellor EUSL

Nursing education, at EUSL, apart from being in the forefront among Sri Lankan universities, has contributed in no small measure to the establishment of the Faculty of Health Care Sciences. Up until 1994, the explicit aim of EUSL was to establish a faculty of Paramedical Studies. In 1995, the idea was transformed to include the establishment of paramedical studies as a means to establishing a fully fledged medical faculty or rather a Faculty of Health Care Sciences, of which paramedical studies formed a Department – the Department of Supplementary Health Sciences. The idea has now become a reality.

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Case review- Meckles diverticulum and persistant urachus.

R.Ramprasad+ P.Jeepara*

Abstract.

Meckel's diverticulum is the most common congenital anomaly (abnormality) of the gastrointestinal tract (stomach and intestines) and is present in approximately 2% of the population.

An eight month old child presented to us with swelling around the umbilicus, which was initially diagnosed as umbilical abscess. Exploration of umbilicus revealed a meckles diverticulum and a patent urachus.Both were resected and the histology confirmed our diagnosis.

Case history

An eight month old child presented to the primary care unit of teaching hospital batticaloa with a 4 day history of loose stools, fever for 2 days, swelling of the umbilical area. The baby was seen by the pediatric medical officer and was referred to us with a provisional diagnosis of umbilical sepsis with acute gastro enteritis.

On examination the baby was febrile, irritable, and the abdomen around the umbilicus was reddened and tender. our impression was that of a sub umbilical abscess. The baby was scheduled for exploration of umbilicus.

On exploration of the umbilicus it was found that purulent discharge was coming from an intra peritoneal structure, laparotomy was undertaken.

Laparotomy findings.

A meckles diverticulum was found to be arising from the antimesenteric boarder of the ileum and was attached to the umbilicus; also a patent urachus was present. The third structure was the ligamentum teres, which was also attached to the umbilicus. All three structures were found to be inflamed. The meckles diverticulum and the inflamed parts of the ligamentum teres and urachus were resected and the gap in the bowel was anastomosed transversely.

The baby recovered remarkably and was discharged on the 8th post operative day.

Histology

A cavity showing acute on chronic inflammation, with tissues from urachus and meckels diverticulum.

Discussion

Meckel's diverticulum is a true intestinal diverticulum that results from the failure of the vitelline duct to obliterate during the fifth week of fetal development. It contains all normal layers of the intestinal wall and, in approximately 50 percent of cases, contains tissue from other sites (ectopic tissue).[2] This ectopic, or heterotopic, tissue can often be the cause of complications occurring in Meckel's diverticulum. Meckel's diverticulum occurs in about 2 percent of the population, making it the most prevalent congenital abnormality of the gastrointestinal tract. Even so, it can be

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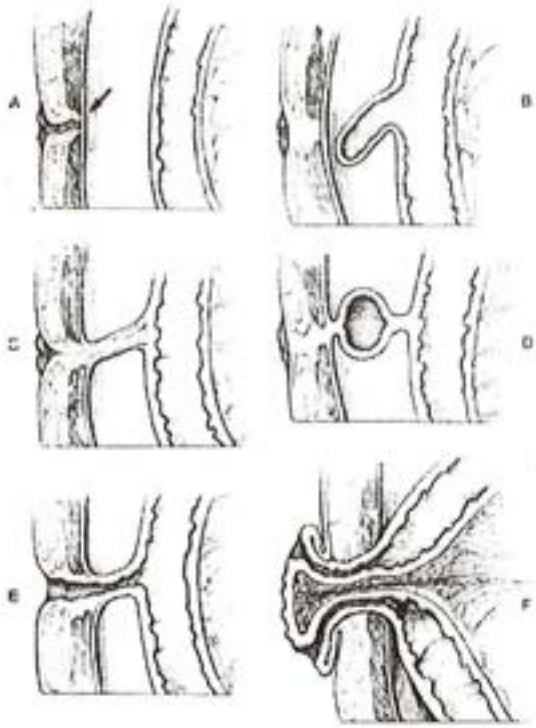
difficult to diagnose.[2] It can be asymptomatic or mimic common abdominal disorders such as Crohn's disease, appendicitis and peptic ulcer disease.[2]



A, Vitelline duct sinus. B, Meckel's diverticulum.

C, Persistent cord of scar. . D, Vitelline duct cyst.

E, Patent vitelline duct. F, Prolapse

SYMPTOMS

The "rule of 2" often is cited in association with Meckel's diverticulum: 2% occurrence, two types of abnormal lining (stomach and pancreas), located within 2 feet of the junction of the small and large intestine, approximately 2 inches in length, and usually symptomatic by 2 years of age. Symptoms result primarily from bleeding into the intestine (40%), blockage of the intestine (35%), or inflammation (reaction by the body) (17%) (Table 1). Symptoms vary indirectly with patient age (Table 2). In newborns, blockage of the intestine is the most common presentation, whereas bleeding is noted more frequently in slightly older infants and young children. More than 95% of Meckel's diverticula do not cause symptoms. Surgical removal is indicated if symptoms occur. If there are no symptoms some surgeons may still recommend surgical removal in children.

Table 1. Meckel's Diverticulum: Incidence of Complications

	All Patients %	Symptomatic Patients Condition %
Bleeding	22	38-56
Obstruction	13	33-42
Inflammation	2	6-14
Umbilical pathology	2	5-6

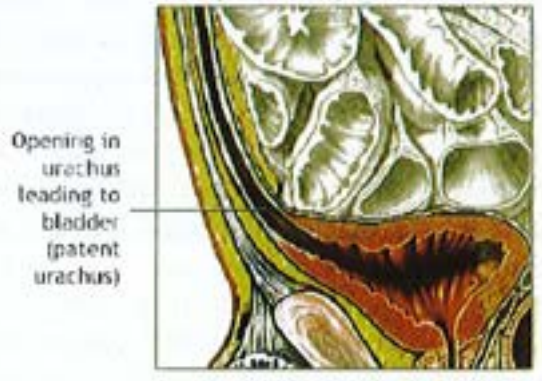
The most common symptom of a Meckel's diverticulum is a large amount of intestinal bleeding, usually in children younger than age 5 years. The stools are characteristically maroon in color and unassociated with vomiting of blood. In many cases, bleeding subsides for a period but recurs intermittently. Bleeding is occasionally excessive and may require blood transfusion. Although spontaneous stoppage of bleeding is the general rule, occasionally life-threatening bleeding may occur.

The second most common presenting symptom with Meckel's diverticulum is intestinal blockage. This usually occurs in the first few months of life. This is treated by surgery and surgical correction including surgical removal of the outpouching. Twisting of the intestine around a band may be associated with reduced blood supply to the intestine. The third most common presentation of Meckel's diverticulum is inflammation, which usually gives a clinical picture similar to that of appendicitis. If the appendix is normal at the time of surgery for suspected appendicitis, a careful search for a Meckel's diverticulum should be made. The inflammation often is related to the abnormally located stomach lining or the pancreatic tissue in the diverticulum. This inflammation can cause a hole in the intestine with spread of infection in the abdominal cavity or a localized pus pocket or abscess. These patients require

intravenous fluid and preoperative antibiotic therapy. Inflammation of the Meckel's diverticulum is treated by surgical removal. Occasional reports have described foreign bodies (e.g., fish or chicken bones) stuck in a Meckel's diverticulum. Stones also have been reported, and even parasitic infections have been observed in diverticula on rare occasions.

Patent urachus

During fetal development the urachus is a tube that connects the bladder to the umbilicus. After birth, the urachus normally closes and becomes a ligament. If the urachus remains open, surgery is recommended so that bacteria or infection cannot be introduced into the bladder. A urachal sinus derives from a persistently patent urachus. The sinus drains to the umbilicus, and this drainage often is the result of episodic infections of the sinus, resulting in the appearance of purulent drainage at the umbilicus. Children may present with periumbilical tenderness, a wet umbilicus, or granulation tissue at the level of the umbilicus. In many instances, these children have undergone multiple sliver nitrate cauterizations under the mistaken notion that this is simply granulation tissue after severance of the remnant umbilical cord



Conclusion.

Any patient with an umbilical discharge or with evidence of umbilical inflammation should be investigated thoroughly bearing in mind the possibility of a meckels diverticulum.

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CARCINOID TUMORS: A CLINICAL CASE REPORT

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ABSTRACT

Carcinoid tumors are neuroendocrine tumors derived from enterochromaffin cells, which are widely distributed in the body. They can originate from any location in the body, but they are traditionally described as originating from the foregut, midgut, and hindgut. Although the overall incidence of carcinoid tumors appears to have increased in the past decades, the prognosis for patients with carcinoid tumors has improved during the last decade.systemic signs and symptoms are usually not present. Patients often present with the characteristic symptoms of the carcinoid syndrome, such as diarrhea, flushing, and, less frequently, wheezing In most patients, the diagnosis is based on tissue examination, usually of a biopsy from a liver metastasis.Tumor markers and nuclear scentigraphy ,other radiological investigatons such as CT also useful in diagnosis. **.Combining new diagnostic and treatment modalities in carcinoid patients may result in better quality of life and longer survival times. The increasing number of therapeutic options and diagnostic procedures requires a multidisciplinary approach, with decisions made in multidisci plinary meetings focused on "tailor-made" therapy based on patients' specific conditions. Because carcinoid tumors are uncommon, effort should be made to treat these patients in specialized centers and for these centers to join together in multicenter studies.**

CASE HISTORY

A 55 year old patient presented with a hstory of generalized abdominal distension and loose stools of one month duration.On examination abdomen was generalized distended and gross ascites was detected.Haematological investigations such as FBC,LFT,BU,S.Cr were normal.USS abdomen,.upper and lower endoscopies were normal.CT scan showed that there is a mass close to the asending colon.Clinical diagnosis of bowel malignancy was made and planned for exploratory laporotomy. During surgery gross asites was found and there was a mass which is attached to the greater omentum. (FIG.1)Careful dissection with adequate margine was done and specimen sent for histology.Histology came as carcinoid tumour (Neuro endocrine tumour)and patient sent to cancer institute of Magaragama for further management.

INTRODUCTION

Carcinoid tumors are rare tumors, the annual incidence is around two cases per 100,000, and first described in 1888 by Lubarsch [2].Classification of neuroendocrine tumors originating from the gastrointestinal tract is the revised classification of neuroendocrine tumors of the lung, pancreas, and gut by Capella et al. [04]. In this classification system, tumors are graded as: benign, low-grade malignant, and high-grade malignant.Carcinoid tumours are relatively slow growing and even in the presense of metastasis patient can survive for several years. Most of the patient are asymptomatic.Common presenting symptoms are diarrhea,flushing ,and less frequently wheezing.(5) Carcinoid heart disease (CHD) is a late complication and occurs in 20%–70% of patients with metastatic carcinoid tumors (6)In most cases the diagnosis is based on histological examination.Diagnosis can be made with

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clinical symptoms combined with Radiological and syntigraphic findings.Breakdown products of serotonin (5-HTAA)has been the gold standard for the diagnosis and follow up.(7) Chromogranin A (CgA) is an acidic, hydrophilic protein present in the chromaffin granules of neuroendocrine cells. It can be used in the detection of functioning as well as nonfunctioning tumors. (7)

Computerized tomography (CT) scanning can be used for visualizing liver metastases, extrahepatic tumor localization in the abdomen (lymph nodes, mesenterial tumor deposition), and tumor localization in the mediastinum and lungs *Bone Scintigraphy* is useful in detecting bone metastasis having a high sensitivity of 90%–100% and can be used in patients with the suspicion of bone metastases [1

MANAGEMENT

Multidiciplinary approach with a team consisting of an oncologist ,a surgeon,a pathologist ,a gastroenterologist,a cardiologist,a radiologist, and a nuclear medicine specialist.

Supportive Care

Flushes can be reduced by avoiding stress and foods known to provoke symptoms (e.g., alcoholic beverages, spicy meals). Diarrhea can be treated with simple antidiarrheal medications, such as loperamide

Octreotide Analogues

Octreotide, a somatostatin analogue, has a half-life of 90–120 minutes and can be administered subcutaneously every 6–8 hours. Octreotide can induce symptomatic improvement in up to 80% of patients,

Interferon-$_{\alpha}$

Interferon (IFN) was introduced in 1982 as a treatment modality for carcinoid tumors. . Biochemical and subjective responses are reported in 40% and 70% of patients, respectively.

Systemic Chemotherapy

The indication for chemotherapy in neuroendocrine tumors is limited, and it is reserved for high-grade malignancies, which represent only a small minority of this tumor group. Single-agent chemotherapy is not very useful in the treatment of carcinoid tumors, with very low response rates of about 5%–10%. Although schedules with combination chemotherapy have slightly better response rates (15%–30%), these results are still disappointing [13]. A direct comparison between IFN and chemotherapy did not result in a better response rate with chemotherapy . Therefore, chemotherapy is not considered to be a first-line treatment for carcinoid tumors.

Conculusion

Evethough carcinoid tumours are rare,one needs to keep this condition in mind ,when the patient came with a relevant symptoms.Because prognosis of carcinoid tumour is good and 5 year survival rate range from 70%-80%. Combining new diagnostic and treatement modalities in carcinoid patients result in better quality of life and longer survival time.

Fig.1

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New Trends in Diabetic Retinopathy

S.Thivahar *

Ocular complication resulting from diabetes is one of the leading causes of blindness in Sri Lanka. Preventive maintenance in the form of tight glycaemic and blood pressure control is the best way to prevent the development and progression of diabetic retinopathy.

Once proliferative diabetic retinopathy or clinically significant macular oedema develops the studies such as **diabetic retinopathy study** and **early treatment of diabetic retinopathy study** have shown that pan retinal photocoagulation (PRP) and focal laser have proven beneficial in the prevention of blindness and vision loss in diabetic patients.

Although pan retinal photocoagulation has been shown to prevent severe vision loss, it is not without complications. In addition to risks of procedure such as choroidal effusion, developing macular oedema and retinal detachment, a patient can expect to have a permanent reduction in night vision and peripheral vision, increased glare and reduction in contrast sensitivity. Peripheral bouts of focal and grid laser can lead to increased macular ischemia and potential vision loss.

Screening for diabetic retinopathy

All diabetes aged over 12 years and/or entering puberty should be screened and those with risk factors for visual loss referred to an Ophthal mologist. Screening involves measurement of visual acuity for distance and near and fundus examination following pupil dilatation with Tropicamide 1%.

Screening based on age of patient and pregnancy

Age	1st time	Routine follow up
0 - 30	Within 5 years of diagnosis	annually
31 -older	Upon time of diagnosis	annually
pregnancy	Before conception or early 1st trimester	Every 3 months or at direction of Ophthalmologist

Based on retinopathy finding

Depending on severity of retinopathy and threat to visual function, the Ophthalmologist prefers to follow selected patients more often because of anticipated need for treatment.

Normal	Annually
Mild non proliferative diabetic retinopathy	Every 9 months
Moderate non proliferative diabetic retinopathy	Every 6 months
Severe non proliferative diabetic retinopathy	Every 4 months
Clinically significant macular oedema	Every 2 – 4 months
Proliferative diabetic retinopathy	Every 2 – 3 months

On the other hand advanced diabetic renal disease and anaemia also may have an adverse effect on diabetic retinopathy.Patients with proliferative diabetic retinopathy are also at increased risk of heart attack, stroke, diabetic nephropathy, amputation and death. Pregnancy

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is associated with worsening of retinopathy. Although many of these patients will have some regression of retinopathy after delivery, photocoagulation treatment is greatly recommended if high risk proliferative diabetic retinopathy develops during pregnancy.

Treatment Options

Although the gold standard is still using pan retinal photocoagulation for proliferative diabetic retinopathy and focal and grid laser for clinically significant macular oedema,new medical as well as surgical treatment options are currently being used an alternative or adjuvant treatment for patients who have ocular complications resulting from diabetes.

New medical therapies are mainly targeted at reducing the production of vascular endothelial growth factor (VEGF) and reducing capillary permeability. It has been shown that diabetic and hypertension can lead to retinal ischemia, which in turn results in an increase in level of VEGF in the eye. VEGF induces not only neovascularisation of eye, but is also responsible for increasing vascular permeability resulting in clinically significant macular oedema.

Earlier intravitreal steroids injections, intraocular steroid injections such as Retisert(flucinolone acetonide intravitral implant)and Posurdex (dexamethazone implant)have been shown to be effective in treating patients with chronic iritis and persistent macular oedema.

The downside to above treatment is high prevalence of cataract formation and intraocular pressure increase associated with steroid use. Unlike the steroid counter parts, intravitreal injection of anti VEGF medications such as Avastin, Macugen(pegaptanib sodium injection)and Lucentis (Ranibizumab injection) have not been shown to increase cataract formation or induce intraocular pressure spikes.

On going studies have shown A 1.25 mg intravitreal injection of Avastin which was the dose given for the patients, is about 300 – 400 fold lower than when administered intravenously, is very effective. When a great amount of retinal neovascularisation, fibrous tissue and traction exists; localized retinal detachment may occur when neovascularisation regress. For this reason most vitreoretinal surgeons will give an injection of Avastin only if they plan to follow up procedure with vitrectomy to remove the fibrous tissue and retinal traction.

A trans plana pars vicrectomy(TPPV) with or without membrane peel increase retinal Oxygen level. The highly oxygenated aques humor from anterior chamber makes its way back to retina thus reducing hypoxia and VEGF level in retina. The oxygen level around posterior lens is lower in intact vitreous humor.

The higher oxygen levels around the posterior lens after vitrectomy explains why every patient develops cataract within 2 years after vitrectomy. Vitrectomies are also being done to relieve the retinal traction on macular in patients with recurrent or intractable clinically significant macular oedema

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GERIATRIC CARE AND GENERAL PRACTICE.

Arulanandem .I.K.*

First of all, I would explain why I have selected this topic for this BMA article. As you all aware, we expect a better standard of living with all aspects of physical mental, psychosocial, well being but we do fail to think and accept from when. Thus the most important biological factor AGE comes in, which would be the one and most vital factor for many problems of day to day life especially considering human as a social animal. As ageing is a gradual process and goes through several cyeles of individual human life with different names and values as well as varying responsibilities and also with peculiar roles on demands of society.

We start our journey from the uterus of our mothers and end in a place of universe. Until then we are living, but our old ages are to be considered more important than the early days. The National, International health authorities try their level best to promote better health through neonatal, childhood. adolescent and specialized care for whom it needed. As such elderly people are increasing in number, and most of us **do not understand** the real social, psychological as well as medical problems they face in their day to day life when they get old to very old .Hence , as a general practitioner understand the social , emotional components more important than their actual medical problems. Because, general practice consultation differ from hospital based clinical consultation where in general practice the **consultation enviournment is initiated and controlled by the patient** while a lot of hidden agenda is brought out. The first encounter of elderly patients is considered more crucial and important because patient – doctor relationship should be satisfactory fore further future management. During these types of consultation sharing of feelings, listening, understanding as well as touching would take place along with empathy.

For eg: an elderly patient would be highly worried about his simple constipation or insomnia rather than his open heart surgery or broken limbs. In many occasions the patients feel they are **being isolated**, loss **of identity**, **lack social familial financial support**, **elderly abuse** and **noticing their changes in their daily activities** while counting their days and preparing for their death. These untold stories will be expressed with depressed mood while tears on eyes. Their impairment of vision and hearing along with reduction of basic skills may be misunderstood on their behavior. A good general practitioner becomes as a therapeutic agent as his geriatric problems are well understood.

Activities of daily living (ADL) such as grooming, dressing, eating, toileting and walking become gradually declining from their early **Instrumental activities of daily living** (IADL) of shopping, money changing, marketting, cooking, driving and etc. Thus they become dependents on others. Need for a care taker become essential either in homes or else where. Due to **rapid globalization** as well as **under estimation** of our social values had caused many geriatric management problems but in early years, good extended family system with high social values were existing for generations. Therefore, we should reconsider it with modern technology as well as with formal education. Attitude of caring elderly patients should be equivalent of considering our small loved ones.

A satisfactory atmosphere should be adopted for elders for their better successful later days

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of life. Following suggestions would be more applicable from a general practitioner view.

1. **Family physician or General practitioner** should take the initiative move on children to understand the values of parents or elders during his practice – **Behaving as a model** because of his chance of seeing the whole family members on different occasions.

2. **School health motivational programs** should be organized and coordinated by the general practitioners on geriatric problems to youngsters while they are young and active – (Behavior change programs) collaboration with relevant health , educational authorities.

3. Social Clubs or other organizations should come forward to help with identified targets to uplift their living standard **with the help of general practitioners.**

4. Geriatric centers should be established with suitable for culture and social and other related background, **coordinated and managed by general practitioners** with the help of prevailing social support.

5. General practitioner would accept **home visits**

6. **Administrative structure should recognize the needs and problems** of elders in the society and be able to prepare benefiting social schemes. here the general practitioners should be coordinating.

7. **Cultural activities and entertainment** programs should be organized on special cultural days for elders.

8. Government may have to consider **special financial supporting system** for elders according to their new demands those who are not drawing pension.

9. **Preference should be given** where ever, whenever needed for elders – General practitioner can coordinate with other resources.

Health is not well understood until it is lost thus we should value the health of the elders while understanding their problems.

Elderly people should enjoy reasonably acceptable good standard of living before they disappear.

"Work together for better elderly society"

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Oral Precancerous Lesions and Conditions

*Sayalolibavan . N**

Oral cancer is considered as having a relatively high prevalence in South East Asia and South Asia including Sri Lanka. It has been estimated that oral cancer accounts for nearly 30% - 40% of all cancers. Oral cancer is potentially curable provided it is detected in its early stages. Moreover, most oral cancers develop from precancerous lesions. Many such lesions are fairly easy to identify by a simple routine oral examination. There is clear evidence to say that the malignant transformation of these oral pre-malignant lesions can be slowed or even stopped by suitable intervention techniques.

Unlike many internal organs, the oral cavity is accessible to inspection. Hence, it provides ideal conditions for simple and repeatable screening which can be done routinely with minimal cost. It is very important to identify the 'high risk' oral precancerous lesions. These lesions should be differentiated from the 'low risk' and non precancerous (benign) lesions.

Screening for oral pre-cancer could be easily carried out as a part of general medical and dental examination. Alternatively, it could be carried by epidemiological methods such as house to house surveys, targeting the high risk group in a particular area. Primary health care workers could be trained to screen the oral cavity of rural populations during their routine work. Once a person with an oral precancerous lesion is detected, he or she has to be referred immediately to a Dental Surgeon for confirmation and further monitoring as well as management.

Definition of precancerous lesions and precancerous conditions:

A morphologically altered tissue in which cancer is more likely to occur than in its apparently normal counterpart is known as a precancerous lesion.

A generalized state associated with a significantly increased of cancer is known as precancerous condition.

Classification of precancerous lesions: These can be classified into either leukoplakia or erythroplakia depending mainly on the colour of the lesion. Leukoplakia may be divided into homogenous leukoplakia and non-homogenous leukoplakia. Non-homogenous leukoplakia can be classified into

1). Verrucous leukoplakia
2). Nodular leukoplakia
3). Erythroleukoplakia (speckled leukoplakia, erosive leukoplakia)
4). Mixed

Homogenous leukoplakia – a uniformly white lesion with smooth corrugated or cracked surface

Verrucous leukoplakia– a white lesion with a hyperplastic (exophytic) or a warty surface
Nodular leukoplakia – a white lesion with a granular or nodular surface
Erythroleukoplakia – a leukoplakia with combined white and red appearances
Mixed leukoplakia – a white lesion with a combination of nodular, erosions or verrucous change.

Leukoplakia may be defined as a white patch which cannot be removed by scraping and cannot be attributed to any other diagnosable disease. The term leukoplakia should be used to describe two etiologic categories of lesions:

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1)White patches of unknown etiology classified as 'idiopathic' or 'cryptogenic'
2) Tobacco and betel quid associated leukoplakia.

The following white lesions should not be termed under leukoplakia:

1).White lesions which are not related to tobacco or betel quid
2).White lesions which are related to a known local cause such as friction
3).White lesions due to systemic diseases or conditions (e.g. lichen planus)

These lesions should be classified according to the known cause which must also include the name of the lesion. e.g. if the white lesion is due to friction, then the lesion is known as frictional keratosis.

Clinical description of leukoplakia: the complete description of a leukoplakia should contain clinical, topographic and etiologic components. These lesions are characterized by the presence of a white patch anywhere on the oral mucosa. They may vary from a quite small and circumscribed area to an extensive lesion involving a large area of mucosa. The appearance is also variable. The surface may be uniformly smooth or wrinkled and sometimes smooth surface lesions may show small cracks or fissures. While some appear homogenous others may be nodular with a granular surface called speckled or nodular leukoplakia.

Erythroplakia: A well defined patch with fiery red, velvety surface which cannot be characterized clinically or pathologically as due to any other condition.

Clinical description: The lesions of erythroplakia are usually irregular in outline though well defined. Like leukoplakia it could be homogenous or granular. In homogenous erythroplakia the surface is smooth whereas in granular the surface is nodular or granular. Erythroplakias are most commonly found on buccal mucosa. Less commonly they occur on the soft palate and rarely on the tongue, floor of the mouth or gingiva.

A number of conditions may appear as red areas on the mucosa and should be clinically and histologically distinguished from erythroplakia. These include some dermatoses, inflammatory conditions due to local infection or a more chronic stomatitis associated with the presence of dentures, fungal infections such as candida stomatitis, tuberculosis and other conditions such as erythema multiforme.

Oral precancerous conditions: Although tertiary syphilis and sideropenic dysphagia are also considered as precancerous conditions, the following three conditions seem to be more important.

1). Oral submucous fibrosis
2). Erosive lichen planus
3). Discoid lupus erythematosus

Oral submucous fibrosis: The disease is characterized by palpable fibrous bands in buccal mucosa, lips and soft palate leading to a severe restriction of opening of the mouth.The tongue exhibits limited mobility, is firm on palpation and shows a marked depapillation. The early features include, burning sensation vesicle formation, loss of tongue papillae and loss of oral pigmentation. Leukoplakia is commonly associated with this condition.

Ulcerative lichen planus:
A few cases of cancer development in ulcerative lichen planus have been reported. Oral mucosal lesions are usually multiple and symmetrical in distribution. Lichen planus can be of two forms:

1). Keratotic form – which is characterized by lines or lace-like network is considered to be benign

2). Ulcerative forms – which are associated with atrophy, ulceration or erosion need to be included as a precancerous condition.

Discoid Lupus Erythematosus:

Approximately about 20% of patients with DLE have oral lesions. Vermillion border of the lips and the buccal mucosa are commonly affected. There are a few case reports of carcinoma development in DLE particularly in the lower lip.

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Different faces of Leprosy - photographic views.

Dr N Thamilvannan*

Leprosy has struck fear into human beings for thousands of years. Although, it seldom kills, leprosy is nonetheless a deforming, disabling and stigmatizing disease[1]. The infected human being with mycobacterium leprae bacilli is considered to be the only source of infection[2]. For many decades, it was regarded as an incurable disease. However, with the advent of multi-drug therapy that can cure leprosy has gradually changed the social picture of leprosy. It is now regarded more rationally as a public health problem.

The prevalence rate of leprosy in Sri Lanka is now below 1 per 10,000 population, meeting the WHO's target of elimination[3]. However, there are several endemic areas and many new cases are still detected regularly[3].

Now in Sri Lanka, leprosy control is integrated into the general health services, and leprosy cases are diagnosed and treated alongside other diseases by non-specialist medical officers[3]. But unfortunately, many cases are diagnosed late with the consequences of extensive nerve damage and nerve palsies, and deformities of extremities. These can cause permanent disabilities to the affected patients even after successful therapy. So, diagnosing leprosy at an early stage is very important to minimize its dreaded consequences. This is challenged by difficulties posed to the clinicians, because of its diverse clinical presentations, asymptomatic and non-

specific onset, and slow progression of leprosy lesions.

Here, few clinical photographs of leprosy patients who presented to the skin clinic of Teaching Hospital, Batticaloa (except patient 10) show different clinical presentations.

Patient 1: A 37 year old male presented with multiple hypopigmented patches on the trunk (Figure 1). The patches were anaesthetic.

Figure1: Hypopigmented anaesthetic patches on the back in tuberculoid leprosy.

Patient 2: A male presented with left lower motor facial nerve palsy (Figure 2). There was an anaesthetic plaque on his left cheek.

Figure 2: Left facial nerve palsy in leprosy.

Patient 3: A man was seen at our clinic with clawing of both hands and healed ulcers on palms (Figure: 3a). He had bilateral ulnar and median nerve palsies with thickened ulnar nerves. In addition, there were anaesthetic plaques on his trunk (Figure: 3b) and ear lobe nodules.

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Figure 3a: Bilateral claw hands with healed burn marks.

Figure 3b: Two large anaesthetic plaques with satellite lesions on back of chest and ear lobe nodules (inset).

Patient 4: A young boy presented with painful ulcerating nodules on right lower leg with ichthyotic plaque distally (Figure 4). Right common peronial nerve was found to be tender and thickened.

Figure 4: Ulcerating nodules in type 1 lepra reaction.

Patient 5: A 39 year old non-diabetic female with trophic ulcers on her soles for two years was seen at the skin clinic, after treated by many doctors without any improvement (Figure 5). She had stocking-like sensory loss with thickened common peronial nerves.

Figure 5: Trophic ulcers with deformed big toes.

Patient 6: A 51 year old female with recurrent blisters and painless wounds on her fingers for one year was referred to skin clinic (Figure 6). Though she sought treatment from local hospital over six times, leprosy was not suspected. She had definite thickening of ulnar nerves.

Figure 6: Ulcers on finger tips.

Patient 7: A school girl who developed sudden onset right foot drop six months ago was seen at the skin clinic (Figure 7)

A hypopigmented patch with impaired sensation was noticed on her right knee

Figure 7: Right foot drop with a hypopigmented patch over right knee.

Patient 8: A man in his sixties developed numerous symmetrically distributed hypopigmented patches on his trunk and extremities (Figure 8). Sensation of the patches was preserved. But, he had stocking-like sensory loss of his feet.

Figure 8: Symmetrically distributed hypopigmented patches on the back.

Patient 9: A young boy was seen at the skin clinic for thickening of his right ear lobe (Figure 9). His right greater auricular nerve was visibly thickened.

Figure 9: Thickened right ear lobe and visible greater auricular nerve over right sternocleoidomastoid muscle.

Patient 10: A man in his sixties was seen at the skin clinic of teaching hospital, Kandy, with the features of leonine facies (depressed nasal bridge, loss of eyebrows, skin infiltration of face and ear lobe nodules) (Figure: 10). He had glove and stocking type peripheral sensory loss.

Figure 10: Leonine facies in lepromatous leprosy. (Courtesy Dr Manel Dissanayake, consultant dermatologist, teaching hospital, Kandy).

Patient 11: A young male presented with hypopigmented slightly scaly macules on his upper trunk and upper arms requesting treatment for pityriasis versicolar (Figure 11). There was a large erythematous plaque with sensory impairment over right clavicular area.

Figure 11: A tuberculoid leprosy lesion and similarly looking pityriasis versicolar lesions in the same patient.

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YOGA LIVING PEACE, IN YOUR MIND LIVING ART, IN YOUR BODY

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During the recent years, there has been considerable interest in the science of yoga and its effect on the human body and mind for health and healing. Even the advanced western scientific thought has been seized with the possibility of a break through in complex cardio logical and various other conditions, through the medium of yoga.

Yoga is probably needed more today.Specally in North and East provinces in Sri lanka,the man made and the natural disasters devastated all most all the human life's and their minds, than it was in when the ancient sags worked their wisdom. Though man is the most adaptable of creatures, there is a limit to which he can push himself without adversely affecting his health. Life today has become one of stress and strain, tension and frustration.Cut_throat competition and breakneck speed. The human mind and body find it difficult to cope up with these, and mind based or psychosomatic ailments are on the increase.

It is only too well known that as a result, various systems in the body are affected and this results in coronary heart disease, high blood preasure,peptic ulcer,colitis, diabetes, asthma, insomnia,depression,anxity etc.We cannot always change stress situation in our life's but what we can change with a regular practice of yoga, are our attitudes and reactions to stress situations, so as to lessen their onslaught on health.

Yoga is not only a preventive against disease, but where disease has already crept in, yoga techniques are in no way antagonistic to modern medicine. Within these deceptively simple physio/psycho/spiritual practices, (Def.of. Health WHO) lie the fruits of thousands of thousands years of careful and systematic study.

Science and technology today are marching ahead with such rapid strides that while the ink dries, a new invention has probably been made. This is very applicable to the rate of progress in the medical science. The human body has been progressively dissected threadbare and the list of diseases and the combination of cures for them multiply. Yet ,there are diseases for which even the causes allude mans intelligence. In these circumstances,yogs today has great utility for the common man. It is no longer only for Sanyasins and recluses.

Only a six feet of floor is enough to practice yoga, Enjoy every day at lest one hour yoga make perfect of your mind and the body with a good sleep from now up to end of our life for the permanent six feet in the earth.

You are the light of the world. Solt of the earth

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