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EDITORIAL
A TIME TO WAKE UP 1 AN ISSUE OF MATERNAL MORTALITY

Dr. Atul P. Munshi, M.D, Hon. Prof.of OB/GY Dr. Babu S. Patel, M.D. Asst. Prof. OB/GY,
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Despite advanced communications technology & a world wide hunt for exciting stories, some tragedies do not attract much attention. Why do the 5,85,000 women who die every year as a result of pregnancy or child birth raise no interest in our Media.? Indeed, maternal mortality rates (MMR) in developing countries are frequently underestimated by

50%. Now, it is time to wake up & we need to ask ourselves at what level of suffering we are prepared to become active.

Retrospective comparative analysis of Maternal deaths of last two decades from 1978 to 1987 & from 1988 to 1997, at this institution was carried out to compare the MMR, role of responsible factors, changes in causes & pattern of maternal deaths , etc, to know our position at the -beginning of this new millennium.

MMR was expected to be less than 200 per 1,00,000 live births by 2000 AD. It was 662/1,00,000 live births, in earlier decade (1978 to 1987) & 388/1,00,000 live births in last (1988 to 1997). More young & primipara mothers were lost in last decade. Early marriage & immediate pregnancies without family planning knowledge is still responsible for this. Expectant mothers residing in urban area are also negligent about antenatal care & come to the hospital only during emergency. In Ind ia till today about 75% women deliver at home &. 50% deliver without help of traditional birth attendant also.

Deaths due to direct causes have decreased in last decade, but Indirect causes like hepatic diseases, Renal failure, malaria etc are on rising. Anaemia is still leading cause of maternal deaths (24.13%) followed by PIH (21.92%)

It is important to remember that maternal mortality is only the tip of the iceberg & it has been estimated that for every mother who dies, 15 to 20 will suffer serious long term complications & more than 100 will suffer acute morbidity episodes.

Now, much has been learned about ways in which it should be possible to reduce maternal mortality & it is time to wake up & to implement this knowledge.

Maternal mortality can in principle be prevented by avoiding pregnancy, by preventing the complications during pregnancy or by making sure that the complications that do arise are taken care of effectively.

Effective reduction of maternal deaths requires long-term efforts. Countries that have been successful in reducing maternal mortality such as Chile, China, Cuba, Iran have all developed a long plan supported by a strong political will to reduce the maternal mortality. Withholding essential health care to the half of humankind that procreates means certain deaths for intolerable numbers.

Placing resources into health & education is a sound investment because it speeds up development. Improving maternal & newborn health globally is feasible & is a duty. As we set realistic targets & begin to meet them, public support for development will grow & strengthen. Through professional associations, governments & personal networks, we can make this happen by our efforts and will.

ENDOTHELIUM AS AN ENDOCRINE ORGAN- IN HEALTH & DISEASE.

Dr. Janardan v. Bhatt. M.D (Medicine), M.D. (physiology), Ph.D (physiology)
Editor.

The endothelium was initially thought to be a smooth inert non- thrombogenic lining of the blood vessel. For last two decades, it has been found that vascular endothelium does not merely provide a smooth lining between blood and vessel-wall but it is metabolically very active. It is also found that endothelium produces a large variety of substances which regulate vascular tone, structure & integrity of blood vessels and also affect the growth and metabolism of surrounding tissue. Total mass of endothelium in a healthy adult man of 70 kg. weight is about 1800 gms-2000gms & considered as the largest endocrine organ (paracrine) of the body. The endothelium produces physiologically active bio¬chemical substances which affect the blood vessels and other tissues & play significant role in health and disease. The substances that cause predominantly vaso-dilatation are (1) Nitric oxide previously called Endothelial derived relaxing factor (EDRF) (2) Prostacycline (PGI2) (3) Endothelial derived hyper- polarising factor (EDHF).The substances that cause predominantly vasoconstriction are (1) Endothelin-1, (2) Angiotensin -11 (A-1I), (3) Thromboxane- A2 (TXA2), (4)

Free radicals- super oxide O2. Normally, there is delicate balance between vasodilatory and vasoconstricting substances and help to regulate vascular tone of blood vessel. Researches have already demonstrated morphological and functional alteration in endothelium in many diseases i.e. hypertension, atherosclerosis and there is new therapeutic potential to correct this endothelial alteration by various means and correction of various disease processes .

Interestingly, it is also found that some of these substances also act as factors regulating the growth and proliferation of vessel wall smooth muscles. Nitric Oxide (NO) and prostacycline are anti- proliferative while endothelin-1 and Thromboxane- A2 are proliferative and growth promoting to smooth muscles of the blood vessels. Under physiological conditions, endothelium regulate the transport of nutrient and macromolecules from blood stream into the vessel wall. The healthy normal endothelial cell- permeability is essential for the controlled transport of macromolecules and is maintained by cell to ce(l adhesion. This is essential to prevent the migration of unwanted substances into the vessel wall.

Under healthy state, the smooth lining of endothelium prevents the circulating blood cells i.e. monocytes, platelets from adhering to the vessel wall. Thus endothelium maintain the normal vascular integrity and structure. Recently endothelial cell growth factor (ECGF) and angiogenic factor is postulated to play significant role in angiogenesis. They have been isolated from ischemic tissues and tumours. Essentially they promotes the new vessel growth.

Due to wide surface area and remaining as interface between blood and vascular smooth muscles, the endothelium is primary target of cardio- vascular disease especially certain

blood vessels i.e. coronary arteries, cerebral arteries, aorta. All the risk factors of atherosclerosis (disease of endothelium) i.e hypertension, tobacco smoking, etc. have been shown to be associated with the imbalance in the substances produced by the endothelium (endothelial-dysfunction). In endothelial dysfunction, there is imbalance between relaxing factors and constricting factors, proliferating factors and antiproliferating factors, procoaggulant mediators and anticoagulant mediaters. In endothelial dysfunction, there is decrease nitric oxide (NO) release and increase endothelin- 1 expression. So there is abnormal vasoconstriction, platelets aggregation, proliferation and migration of vascular smooth muscles into the endothelium. The permeability and transpor* .nechanism of endothelium is altered, so macro molecules such as LDL-C and monocytes penetrate the vessel wall. Under the effect of adhesive molecules i.e. TXA2, the monocytes and platelets stick to the endothelium. The monocytes migrate and penetrate into the vessel-wall and transform into LDL and lipid laden foam cells, a lesion known as fatty- streak the beginning of atherosclerosis. So the endothelial dysfunction, ultimately leads to the development of atherosclerosis which is responsible for myocardial infarction, cerebrovascular strokes etc.

EDRF- Endothelial Derived Relaxing Factor is known in medical science for many decades. Only recently, EDRF is found to be Nitric oxide biochemically. Nitric oxide is synthesized from amino acid L- arginine in presence of the enzyme Nitric oxide synthetase. Researches have shown that NO is released by large number of factors i.e. sheer stress on vascular wall, acetyl choline, Bradykinin, 5-Hydroxytryptamine, adhenosine, ADP. NO activate gounylate cyclase enzyme leading to formation of cyclic GMP and produces vasorelaxation, inhibition of platelets adhesion and aggregation. Biochemical substance likeN-monomethyl-L- arginine which inhibits the action of NO synthetase leads to hypertensive response in normotensive animals and man. prostacycline PGI2 is a prostaglandin which is vasodilator and inhibits the platelets adhession and aggregation. Its action is mediated via cyclic AMP.

ENDOTHELINS: There is a group of endothelins i.e. ET-1, Et-2, Et-3 etc. They are polypeptides having 21 amino acids. Endothelin-1 is the most important isomer.

Endothelin-1 is synthesized by endothelial cells as its precursor PrePro Et-1, which is cleaved to big Et-1 which is further converted into active Et-1. It is a vasoconstrictor. It also produces proliferating response to vascular smooth muscles and accelerate the process of atherosclerosis. Free radicals i.e. 02 are also generated by endothelial cells and can damage the endothelial cells. They initiate & accelerates the process of atherosclerosis. The effects of free radicals can partly be suppressed by endogenous or exogenous antioxidants. i.e. superoxide- desmutase, vitamin-E. Free radicals are also the major cause of endothelial dysfunction. A poly peptide angiotensin-II and a prostaglandin-Thromboxane A2 are also produced by endothelium and are powerful vasoconstrictors. TXA2 is also platelets adhessing and an aggregating agent.

In healthy state there is a balance between dilatory and constricting, proliferating and antiproliferating, aggregating and anti aggregating factors. In endothelial dysfunction state there is imbalance between these factors leading to altered vascular tone, structure

and integrity of blood vessels. This imbalance may be responsible for condition i.e. hypertension, atherosclerosis etc. It is now possible to measure the endothelial dysfunction by assessment of Acetyl choline induced vasomotion in brachial arteries. When the endothelium is intact, acetyl choline release NO by the healthy endothelial cells and produces vasodilatation. Acetylcholine by their direct action on vascular smooth muscle cells, produces vasoconstriction via muscarinic receptors. Under normal condition of endothelium, the net effect is vaso dilatation. When there is endothelial dysfunction, the NO release is blunted so only vasoconstriction effect of acetyl choline is observed. Degree of vasodilatation or constriction is parameter of endothelial dysfunction and assessed by plethysmography, ultrasonography, or coronary angiography. The reversal or improvement of endothelial dysfunction will be the key issue in the 21st century. Some researches have already documented the improvement in endothelial dysfunction by calcium channel blockers i.e. Nifedipine, ACE inhibitors and antioxidants. Majority of risk factors of atherosclerosis are associated with some endothelial dysfunction. Substances and factors produced by endothelial dysfunctioning cell play some role in pathogenesis of large number of diseases i.e. atherosclerosis, hypertension, diabetic angiopathy, tumours, aging-process etc. This gives a novel therapeutic potential of prevention and treatment of various disease process by modulating these factors. In the next decade more and more researches will be focussed on reversal and treatment of endothelial dysfunction.

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AN APPROACH TO DIAGNOSIS OF SHORT STATURE

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Introduction :
With an increasing awareness and peer pressure, more and more number of individuals present to an endocrinologist or pediatrician for the problem of short stature. A myriad of disorder can cause short stature. Moreover, the investigations as well as treatment are costly. It is therefore an algorithmic approach is required to arrive at an appropriate diagnosis with minimum cost and maximum accuracy. In this article, we discuss the systematic approach for the diagnosis and management of short stature.

Definitions :
The investigation of a case of short stature involves studies of certain growth parameters. These parameters help to define the magnitude of the short stature and determine its

etiology. The important growth parameters commonly used in clinical practice are as follows.

Bone Age	Age for which the bone maturation is average
Chronologic Age	Calendar age
Height Age	Age for which the height is average
Weight Age	Age for which weight is average
Height Velocity	Increment of height in one year
Height Standard Deviation	Deviation of height from the mean height for normal children of this age and sex.Height Standard Deviation Score A height SDs for age is calculated as follows: SD scores equal height minus mean height for normal children of this age and sex divided by the SD of height of normal children at this age and sex.

Classification of Growth Disorders :
With the help of growth parameters the growth disorders can be classified principally into two groups.

(1) Nutritional Short Stature (table-1) :
Here the weight age of child is below 10th percenlil age. The child is underweight for the age and height.
The common causes in this category are starvation, repeated gastrointestinal and respiratory tract infections leading to anorexia and poor food intake. In India, for example, tuberculosis, worm infestations, recurrent gastroenteritis and decreased food intake due to poverty are the principle causes for undernutrition and subsequent short stature. In the developed countries many psycho soci, problems lead to decreased food intake and hence undernutrition. Diabetes mellitus, hyperthyroidism and electrolyte imbalance cause metabolic wastage leading to undernulrilion and result into deprived growth.

2) Disorders of Linear Growth:
Here the weight age corresponds to height age that means height and weights are proportionate. These disorde can be further classified into three subgroups according to the relationship among chronologic age, height age, bone - age and height velocity.

A) Intrinsic Shortness :
It is characterized by inherent inhibition of bone growth that leads affected children to be

short adults. Thes children, at birth, have normal or subnormal height. They continue to grow with normal velocity and their bone age corresponds to height age. They enter puberty at a normal age. The commonest cause of intrinsic shortness is familial normal variant that has a polygenic non pathologic basis. The other causes for intrinsic shortness include intrauterint growth retardation (IUGR), chromosomal abnormalities, i.e skeletal dysplasias and some endocrinopathies.

A variety of congenital disorders may present with intra uterine growth retardation. (IUGR) Most infants with IUGR catch up to normal in the first 6 to 12 months of life the remainders follow either an intrinsically short or a delayed growth pattern. Occasionally IUGR is associated with severe ongoing growth failure, the condition is called primordial dwarfism. The most common primordial dwarf is Russell-Silver syndrome, which is associated with psedohydrocephalus (Normal-sized head with small face), clinodactyly and sometimes subtle body asymmetry. Progeria is another type of primordial dysmorphic syndron which is characterized by bird headed dwarfism, balding and premature aging. Congenital viral infection e.g. rubell; can lead to foetal undernutrition and short stature.

Several types of skeletal dysplasias can present wit! intrinsic shortness and short stature. The commonest variet is achondroplasia. In skeletal dysplasia the span is shorter than the height and the child has large head with normal intelligence.

Genetic chromosomal disorders present with seve congenital anomalies and shortness. Chromosomal aneuploidy or Down's syndrome is associated with congenital stuting of growth and cerebral dysfunction. Turner's syndrome is one of the commonest and most classic forms of chromosomal abnormalities associated with short stature. It affects one out of five thousand newborn girls an it is characterized by short stature, hypogonadism and seve phenotypic features. At birth, they are small and follow 3rd percentile of growth channels. The pubertal surge ofincrea in height is absent due to hypogonadism. In Noonan's syndrome, children are short and share many phenotypes o Turner's syndrome but they have normal sex chromosomes. It can affect both sex and carries better prognosis for heigh and gonadal function than Turner's.

Pseudohypoparathyroidism - an endocrine disorder is associated with intrinsic short stature. The growth disord is due to the defect in parathormone signal transduction and independent of correction of the hypocalcemia.

B) Delayed Growth :

The commonest cause in this category is constitutional delay of growth and puberty. The typical patient is a boy who is born with normal size but progressively crosses growth channels to be below the fiftl percentile by two to three years of age. Height age and bon age then advance at a normal rate, so that height is below, but parallel to, the fifth percentile through the prepuberty years. The puberty is delayed allowing the child to growth further. A normal pubertal growth spurt allows the child to attain a normal adult height.

At times, it is difficult to distinguish between constitutional delay and subtle abnormalities of GH secretion or gonadotrophins. Finer tests i.e. IGF-1, IGFBP-3, and GH stimulation test with appropriate priming distinguish CDGP from GH deficiency. The distinction of hypogonadotrophic-hypogonadism can be made by the determination of gonadotropin levels during sleep or in response to a gonadotropin releasing hormone or gonadotropin releasing hormone agonist test by 14 year of age.
Several other systemic causes can lead to this type of growth pattern. Lack of nutrition in underdeveloped countries cause blunting of pubertal growth spurt short stature. Similarly, rickets can lead to delayed and shortened growth. Congenital heart disease and anaemias of diverse etiology can cause short stature due to tissue hypoxia. Chronic illnesses of different organs similarly cause short stature.

C) Attenuated Growth :
Children in this category have reduced growth velocity. Their bone age approximates height age indicating the potential for normal adult height. This growth pattern i: always secondary to some disease-endocrine, metabolic or systemic. If it is diagnosed and corrected in time, they gain normal adult height.

Growth hormone related growth failure is the most typical example of this class. It can occur either due to gro hormone deficiency (partial or complete); bio-inactive growth hormone or peripheral resistance to growth hormor

GH deficiency is the most common of these disordi with one fifth of cases having genetic basis. Mutations of the Pit-1 gene lead to deficiency of GH, PRL & TSH. Congenital GH-deficiency can also occur as part of the congenital malformation syndromes. They are sometimes familial and associated with cleft-lip, cleft-palate or septo-optic dysplasia. Ectopic posterior pituitary, which can be identified on MRI, may lead to multiple pituitary hormone deficiency including GH deficiency.

Most of the sporadic GH deficiency is idiopathic and occur one in five thousand children. Hypothalamic dysfunction causing GHRH deficiency is responsible for growth hormone deficiency. Birth trauma following breech delivery can cause GH deficiency. Sellar or suprasellar tumors can compress the hypoihalamus and pituitary gland which can lead to deficient GH secretion. Cranial radiotherapy when given in quantity of more than 50 gy causes GH deficiency in at least 50% of children.

Emotional deprivation is an important cause of functional growth hormone deficiency. The condition is called "Deprivational Dwarfism" in which, children are shi emotionally deprived and have abnormal behaviour. GH tests in such individuals suggest GH deficiency, which improves spontaneously in favorable atmosphere.

Peripheral resistance to the actions of GH may resui from various causes. The growth retardation is proportiona to the severity of GH-resistance. In Laron dwarfism, there autosomal recessive mutations of the GH receptor gene leading to high GH level but low IGF-1 & IGFBP-3. There can be mutation of a single allele of this gene resulting ink partial resistance. A defect in the action of IGF-1 results into pygmy-type of GH

resistance. Any type of chronic illness and undernutrition lead to functional resistance to GH

Juvenile hypothyroidism is an important cause of growth retardation. Many times affected children have a few features of hypothyroidism; the only remarkable featui being growth retardation. Hence every child with attenuate growth pattern should be investigated for hypothyroidism -an entity, which can be, treated very easily and highly rewarding. Hypothyroidism leads to attenuated growth at the time of puberty i.e. 10-12 years of age. Chronic uses of steroids to treat certain chronic ailments lead to attenuated growth. Similarly, chronic acidosis or alkalosis of any etiology results into growth failure.

Various systemic diseases cause growth retardation through different mechanisms. Chronic renal failure produces retardation of growth because of retention of IGF binding proteins and failure of compensatory increase in Growth Hormone secretion. This results into decreased availability of free IGF-1 to growth receptor causing short stature. Regional enteritis causes attenuated growth becaus of nutritional deficiency. It can be diagnosed by history, high ESR and low Serum Albumin and haemoglobin. Uncontrolled diabetes mellitus in prepubertal children caus growth attenuation because of malnutrition. Similarly, anorexia of diverse etiology leads to short stature.

The potential of growth restoration in these disordei are very high provided that they are diagnosed in time and corrected adequately. Once the underlying disorder is identified and corrected the physiological secretion and action of GH take place leading to improvement in growth

Diagnosis :
The diagnostic components of short stature include history, physical examination, auxology, growth charts, general and endocrine tests, radiological investigations and molecular biology, if required.

History and Physical Examinations
A thorough history is essential for the diagnosis of short stature. It includes birth history, pregnancy history, and information about diseases and drugs, nutritional intakes, socioeconomic status etc. A careful and complete general and systemic examination will guide clinical diagnosis and appropriate investigations to confirm it. The physical examination must include examination of secondary sex characters, external genitals, thyroid skeleta deformities and skin changes.

Auxology
All auxological data should be collected and recorded carefully. They include child's height, span, sitting height, standing height, measurements of upper and lower segments. Measurement of the height should be done with wall-mounted stadiometer. Fornewborns and infants, supine length should be measured by box-scale.

Growth Charts
Growth chart is one of the most essential tools for the diagnosis of short stature. Careful and periodic records in growth charts highlights the growth pattern of an individual and encase of growth abnormalities it gives clue about the etiology. Tanner-whitehouse growth charts which are prepared from longitudinal and cross-sectional studies of growth of white children are inappropriate for Indian children because white children are taller than the Indian children. ICMR growth charts should be used for this purpose. They too have limitation because of diversity and heterogeneity of Indian population.

Height velocity is one of the most important growth parameters. It can be determined by measuring child's increase in height over a span of at least one year. In case of older children, this duration can be limited to six months.

Mid-Parental Height
Mid-Parental height can be calculated by taking the average of parents' height and adding 6.5 cms for boys and subtracting 6.5 cms for girls. It is useful to ascertain the natural potential of height of a given individual but it is accurate within a range of ± 8.5 cms.

Bone Age and Prediction of Adult Height and Age of Puberty.
Bone age corresponds better to the age of onset of puberty than the chronologic age. The skeletal maturation and neuroendorcrine developments have common denominators. The bone age can be determined from x-ray of left hand and elbow and if necessary of pelvis and knees The potential of further growth is inversely proportionate to the amount of epiphyseal cartilage growth remaining. The fraction of adult height for each bone age is known. Thus with the help of bone age and current height, adult height can be predicted (method of Bayley &Pinneau). Tht precision of this method is ± 3 cms.

Investigations
Careful history, physical examination and auxological data evoke certain diagnostic possibilities. Investigations should be carried out in an appropriate order according to the clinical suspicion. Complete blood counts erythrocyte sedimentation rate, electrolytes, serum albumii hepatic and renal function, stool test will guide the diagnos of general and systemic causes of short stature. Endocrine tests (table-1) should follow next. Thyroid tests should be carried out before investigating for GH-deficiency. GH secretion takes place in a pulsatile manner. Hence, most of the times basal GH level is low or undetectable in normal healthy children. IGF-1 and IGFBP-3 can be used to screei GH deficiency but they are less sensitive than the GH stimulation tests. Many pharmacological tests are used to detect GH deficiency. At least, two tests on different occasions should be carried out to confirm the diagnosis oi GH deficiency. Insulin-hypoglycemia test is the gold standard of GH stimulation test but because of risk of hypoglycemia, it is not favoured by all endocrinologists. Clonidine, Levodopa, Arginine, and Propranolol glucagon are the other pharmacological stimuli commonly used for GH stimulation test. Peak GH secretion less than 7 ng/ml i; considered severe while peak GH level between 7 to 10 ng ml is considered partial GH deficiency.

The simultaneous measurements of GH, IGF-1 and IGHBP-3 will help delect GH resistance syndromes in whi case IGF-1 and IGFBP-3 will be low and GH level will be high.

In case GH deficiency is confirmed, a CT scan or preferably MRI of hypothalamus-pituitary should be done to detect any structural lesion causing GH deficiency.

Treatment

An appropriate treatment should be started be once the diagnosis of short stature is made. At times there are multiple causes and they should be dealt with simultaneously. A close follow-up is required to assess the growth progress of the child and the outcome of the underlying disorder.

Depending on the diagnosis and the available medical facilities, we fall into one of four situations.

1. Identifiable and treatable, (e.g. Hypothyroidism)
2. Identifiable, treatable but not feasible, (e.g. Growth hormone deficiency because of its cost.)
3. Identifiable but not treatable, (e.g.certain growth hormone resistance syndrome.)
4. Unidentifiable and untreatable.

The family and the individual should be adequately explained about the cause of short stature and its possible management. If the problem can not be resolved either due to the medical or socioeconomic reasons, child and parents should be counselled with optimism and encouragement. "One can always grow in life even if not in height. Short in height is not equivalent to small in life" Society has innumerable examples to support this view both at present in past

DRUG INFORMATION SOURCES : FOCUS ON PROMOTIONAL DRUG LITERATURE

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The last 2-3 decades have been a period of tremendous growth - for pharmaceutical industries & so also for the therapeutic agents - the drugs; causing an explosive rise in their number and also a act - throat competition between the pharmaceuticals for promotion of their products. This development has improved the patient care, but at the same time has left the practicing physician in "THERAPEUTIC JUNGLE" of drugs, many of them being new and hence unknown to him. The practitioner thus is confused as to the best road (drug) to be selected to reach the goal of treatment which is effective, safe and less burdensome (expensive) to the patient. Obviously the practitioner has to keep abreast with the information on the drugs, particularly the new pharmaceutical

products. The information available to him should be authentic, unbiased & complete; in order to enable him to select and use the drug appropriately in a given patient. But what is the present situation ? Is the ideal information available to him ? Does he always make a choice based on such information ? The answer in most cases in no. Inappropriate selection and use of drugs is common without even the-practitioners knowledge about it.

To reduce this problem, first of all we need to know the different drug information sources, These sources can be classified intoNON COMMERCIAL & COMMERCIAL (from pharmaceuticals and thus promotional)

SOURCES OF DRUG INFORMATION
(A) NON COMMERCIAL SOURCES

- Textbooks of pharmacology
- Leading medical journals not supported by Industry
- Clinical pharmacology Therapeutics
- Drugs
- JAMA (Journal of American Medical Association) -NEJM (New England Journal of Medicine)
- Annals of internal medicine
- Achieves of internal medicine
- BMJ Lancet
- DRUG COMPENDIA
- Physician's desk reference
- US Pharmacopeia
- AMA drug evaluation
- Drugs - Facts and comparison
- Indian Pharmacopeia

(B) COMMERCIAL SOURCES (Promotional by drug companies)
- Information by Medical Representative (MRs)
- Direct Mail brochures
- Advertising in medical journals
- Professional seminars meetings organized by Industry.
- Special supplements of peer-reviewed journals supported entirely by a single drug manufacturer.
- Commercial publications eg MIMS - Monthly Index of Medical Specialities, IDR - Indians Drug Review.

Table II
COMPARISION OF COMMERCIAL & NON COMMERCIAL SOURCES

NON COMMERCIAL	COMMERCIAL(PROMOTINAL)
1. Reliable, accurate, informative balanced, upto date, capabla of substantiations.	1.Likely to be unreliable inaccurate, misleading, incomplete,and may contain unverifiable statements.

2. Educational rather than persuasive.	2. Persuasive rather than educational.
3. All adverse effects, precautions, contraindication highlighted.	3. May be deliberately missed to induce unjustifiable drug use.
4. Verified and monitored by FDA.	4. The package insert monitored by FDA .but verbal statements by MRs difficult to monitor.
5. Not easily available, is inaccessible due to physician's busy schedule & not available in rural areas.	5. Easily available, even at practitioners doorsteps.

Non commercial sources of drug information, although objective and reliable are not utilized widely by the clinicians as they are not easily accessible to a busy practitioner. On the other hand, commercially designed drug information is easily accessible, even without any efforts on the. part of the practitioner in the forms described in table -1 & hence utilized by most practitioners.

Moreover, controlled studies have shown that advertising techniques used by industry, are very effective in motivating a prescriber towards a certain product. The main medium of Drug promotion by the Industry is the Medial Representative (MR). The majority of physicians' do agree to the fact that the information spoken verbally by medical representative do influence their prescribing practice. However, there is little objective verification of the informations, since it is difficult to monitor verbal information than written matter. In a study done in a US teaching hospital, it was observed that medical representatives did make false and inaccurate statements about the product favoring it and sometimes contradicting even their package inserts. Adverse effects, contraindications were deliberately neglected.

Another medium of advertising adopted by the Industry is by sending direct mail brochures at the physicians' doorstep. Apart from this, there are advertisements in.

journals which are also easily accessible to the physician. These sources, instead of giving detailed information, may contain eye catching slogans & persuasive literature which may not necessary be authentic.

The other method of promotion is sponsoring educational seminars and conferences. Though these programs contribute to the improvement of patient care and medical education, care should be taken to prevent over indulgence of the industry to favorably describe their own product and interfere with academic interests.

To increase the saleability of their products, the industry has chosen another tool. The practice to give gifts to physicians in lieu of prescribing their products. The gifts could range from elegant dinners to household items, cash payment, free abroad outings etc. The expense of the gift is passed on to the patients in from of expensive & unnecessary medicaments. The cost is ultimately borne by the patients which is unethical.

The pharmaceutical industry has now even crossed the line by promoting their products through direct to consumer advertising-"An idea whose time should not come".

The scenario of Drug advertising in India is more pathetic than that in the western countries. Leading Indian journals carry drug advertisement which give hardly any information about the product. Sometimes it is just the name and a catchy slogan. Doesn't the prescriber have a right to a more complete information? The journals in the west also carry drug advertisement but with a more complete information.

For the physician's benefit & of the patients too; and to promote safe & effective use of drug, the WHO has come up with a drug information sheet. This sheet is a guide to the information that the preserver should expect a demand from a drug promotional literature.

Drug Information Sheet:
1. INN (internationalNon Propriety Name) of each substance.
2. Pharmacological data: A brief description of pharmacological properties & mechanism of action.
3. Clinical Information:
(A) Indications
(B) Dosage Regimens and relevant pharmacokinetic data
- Average and range for adults/children
- Dosing interval
- Average duration of treatment
- Special situations i.e. renal, hepatic, cardiac diseases etc.
(C) Contraindications
(D) Precautions & warnings
(E) Adverse effects
(F) Drug interactions, if any
(G) Overdosage
- Brief clinical description of symptoms
- Non drug Rx and supportive therapy
- Specific antidotes

Pharmaceutical Information:
(a) Dosage forms
(b) Strength of dosage forms
(c) Excipients
(d) Shelf-life
(e) Pack Size
(f) Description of product/package
(g) Legal category
(h) Name and address of manufacturer

5. Cost:
The committee also recognize the need to develop appropriate drug information sheet for consumers.

CONCLUSION
Amidst the THERAPEUTIC JUNGLE of drugs, enough to confuse the physicians, there is a need for authentic and reliable information from the industry too. The practitioners should not be swayed by the glamour & glitter of the complete drug information sheet from the manufacturer. A doctor is a life long learner and whenever possible noncommercial reliable sources of informations should be referred to atleast for new drug. And so to conclude, there is no detailman or pharmaceutical company or patient that puts a gun to a doctor's head to write a prescription. ULTIMATELY IT ISN'T A PATIENTS SIGNATURE OR THE INDUSTRY'S ON THE PRESCRIPTION, IT IS THE DOCTOR'S.

CLINCO-PATHOLOGICAL & ENDOCRINAL CO-RELATION IN CASES OF MENSTRUAL DISTURBANCES

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ABSTRACT
Abnormal uterine hemorrhage is one of the commonest condition for which women attend the gynecological out patient department.

Dysfunctional uterine bleeding (D.U.B.) is an all inclusive term comprising a group of menstrual disorder of different etiology & is not a single disease entity. It refers to some disorder in the endocrinal or physiological mechanism which normally results in menstruation. These mechanism involve the endometrium, ovary, pituitary, hypothalamus & cerebral cortex.

50 cases of DUB were studied, clinically, histopathologically & endocrinally to establish the correlation, mode of management & effect of management.

In our study, 74% DUB cases have some form of hormonal imbalance & as a result, they have some form of menstrual irregularities. So, to manage such type of DUB cases properly, hormonal study of these cases is very helpful to diagnose exact etiology of menstrual disorders.

INTRODUCTION:
In-recent times the use of different steroidal agents for contraception & sterilization procedures may have Contributed to the increased prevalence of menstrual disturbances.

It is orderly sequence of hormonal events culminating in approximate monthly ovulation that is responsible for the consistent & predictable nature of menstrual cycle. Absent, infrequent, irregular & otherwise abnormal menses have diverse causes like dysfunctional ovulatory mechanism or endocrinal disturbances. The diagnosis & management of abnormalities of menstrual function therefore must be based upon understanding of the physiology of the normal ovulatory cycle & other endocrinal hormones.

Material & method:
50 cases of DUB were selected at random but with high index of suspicion for any subclinical hormonal pathology causing clinical symptoms like obesity, under weight, hirsutism, galactorrhoea, thyroid swelling, dryness of vagina etc & were studied clinically, histopathologically & endocrinally to establish the clinico-pathological and endocrinal correlation, mode of management & effect of management.

Observation & Discussion:
The true incidence of DUB is difficult to establish, sometimes the condition is self limiting occurring in cycle or two. It is the first diagnosis in at least 10% of the new OPD patients.

Table 1: Incidence of DUB according to age & parity

	Parity						
Age(yrs)	Nulli	1	2	3	4	>5	Total
10-20	5	0	0	0	0	0	5
21-30	8	8	4	2	1	0	23
31-40	0	2	0	3	2	1	8
41-50	0	0	0	4	4	6	14
Total	13	10	4	9	7	7	50

DUB may occur at any age between puberty & menopause. It is more common in third and in fifth decade. It is more common in parious women then nulli parous women. There are changes of arterioles with age and parity. .Alterations of the spiral arterioles of the endometrium constitute an important local factor in haemorrhage. Responding differently to wide estrogen fluctuations, they cause prolonged and increased endometrial bleeding.

Symptomatology may vary from menorrhagia to secondary amenorrhoea. 50 cases presented as menorrhagia (09), metrohrragia (01), metromenorrhagia (08), poly-menorrhagia (06), dysmenorrhoea (03), oligomenorrhoea (10), hypomenorrhoea (04) and secondary amenorrhoea (09).

Endometrium was collected in 29 cases, by D&C in 28 and by Hysterectomy in one case. Hormonal Essay was obtained in all 50 cases.

Most of the cases have undergone for emergency D&C as therapeutic measure without selection of date for EB or D&C. So in 75% of the cases, HPE is either prolifera-tive or secretary endometrium. 9 cases with normal essay had Normal endometrium. Out of 37

cases having abnormal hormonal essay,20 had undergone D&C. 7 had abnormal endomertia! pattern.
In our study, 37 cases had some form of hormonal

Table: 2
Endometrial Pattern/Hormonal Essay.

Endometrial Pattern	Normal Hormonal Essay	Abnormal Hormonal Essay	Total
Prol iterative phase	6	11	17
Secretary phase	3	2	5
Endometrial Hyperplasia	0	2	2
Irregular Ripening	0	2	2
Atrophic Endometrium	0	3	3
D&C Not done	4	17	21
Total	13	37	50

Table: 3

Type of hormonal abnormalily	Tolal No.	No. of cases benefited by medical R	No. of cases benifilled by D&C	No. of cases benifilled by medR + D&C	Other treat-ment re-quired
Hypothyroidism	6	0	-	5	1
Hyperthyroidism	4	1	-	2	1
PCOD	6	4	-	-	2
POP	8	8	-	-	-
Perimenopausal anovuilatory DUB	7	-	3	-	4
Hyperprolactinaemia	4	4	-	-	-
Corpus luteum insufficiency	2	-	-	2	-
No abnormality	13	4	5	2	2
Total	50	21	8	11	10

abnormalities. These all cases were given medical treatment according to their need & D&C was done, were required.

5 cases of hypothyroidism and 3 cases of hyperthyroidism were managed by medical treatment & by D&C excellently. Only 2 cases required hysterectomy.

10 cases wherein thyroid hormone abnormalities were detected, merit more attention. As such Thyroid gland is not directly concerned with pituitary ovarian uterine axis for either menstrual rhythm or fertility. Nonetheless it has a profound effect on these functions. In absence of other classical symptomatology of Thyroid dysfunction, wherein a woman presents herself with menstrual irregularity, a routine protocol for thyroid function test can unrevel such an abnormality, as can be seen in present study is as high as 20%.

4 case of PCOD responded excellently to medical treatment & only 2 cases were advised for Laproscopic ovarian drilling.

All 4 cases of hyperprolactinaemia & 8 cases of POP responded excellently to medical treatment. Out of 50 cases, 80% cases responded excellently to medical treatment, D&C or both. Only 20% of patients required other ' form of management.

From our study, we conclude that, even though high cost of hormonal assay, it should be done in DUB cases with some clinical abnormalities & if possible in all cases. Most of the patients with DUB can be managed by medically & by D&C only very successfully & many unnecessary hysterectomies can be avoided.

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MORPHOMETRIC STUDY OF THE LUMBER VERTEBRAE FOR THE DIAGNOSIS OF LUMBER SPINAL CANAL STENOSIS

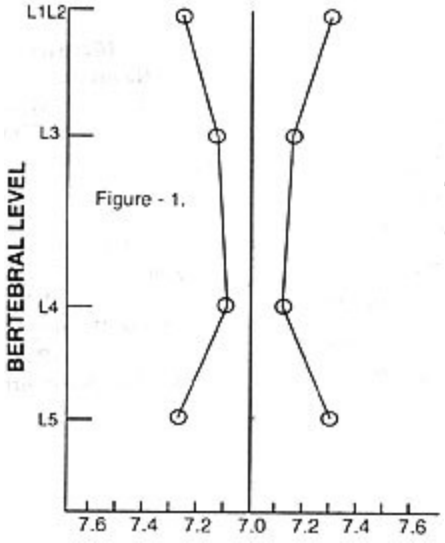

Figure - 1.

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The lumber part of the spinal canal contains the cauda equina.

Anatomical narrowing of the lumber spinal canal and intervertebral lamina, can be congenital or acquired. It has been reported as a cause of compression of the cauda-equina and the emerging nerve roots.

The compression causes neurological complications like, pain in the back and lower limb on walking, weakness and parasthesia along the distribution of nerve roots of lumber spinal nerve -condition called the lumber spinal stenosis syndrome. The symptoms are relieved by reversing the lumber lordosis cither by banding, crouching.

According to verbiest, the sagittal diameters are reduced because of thickened laminae & articular processe or short pedicles.

"Intermittent claudication of the cauda equina" is a condition in which there is bilateral radicular pain, disturbance of sensibility & impairment of motor power in the legs, brought on by walking on standing and relieved by rest.

The overall average lower limit of normal midsagitt diameter was established 15m. m.

In this study, diameter of osteological specimens were taken. This was done on 575 lumber vertebrae.

The sliding vernier caliper was used.

The midsagittal (A.P.) diameter of the canal was measured taking a point on the middle of the posterior surf of the body to the base of the opposing spinous process.

The mid-sagittal diameter in the osteological specimens from L1, L2 to L5 was observed to range from 14.30 m at L4 and 14.81 mm al L5 level, indicating that mid-sagittal diameter is narrowest al L4 leve and widest al L5 level.

The same conclusion wa: there observe by studying 40 skeletons and 35 radiographs.

Various techniques including plain radiography, myelpgraphy, epidural venography, compuled tomography & diagnostic ultra sound & M.R.I, have been used to measure the size of the lumbe spinal canal. But each technique has its own limitalion.

Adult bones were taken in thissludy, as in older age group degeneralive changes like osteophyte formulation increases.

Thus, normal limit of A.P. diameter For each lumber level was found to be :-

L1 L2 - 14.72 mm
L3 - 14.33 mm
L4 - 14.30mm
L5 - 14.81 mm

Indicating that, there is narrowing at L4 level.

FIGURE-1 SHOWS
DIAGRAMMATIC PRESENTATION OF MID-SAGITTAL DIAMETER OF 575 OSTEOLOGICAL SPECIMENS.

SUICIDE

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There are about 1,50,000 suicide attempts every year in the European community. Depression, Schizophrenia, Alcoholism and most other mental disorders greatly increases the risk of suicide. About 15% of people with affective disorders and 10% of people with Schizophrenia eventually kill themselves. Careful assessment and management of Psychiatric patients may help to prevent some of these deaths.

Suicide is the deliberate taking of one's own life.

Attempted suicide can be by a variety of means. Self poisoning, self strangulation, failed attempts at hanging, drug overdoses and the like.

There are about 4500 recorded suicides in the United Kingdom every year and 30,000 deaths are attributed to suicide on the United States. This work out as a recorded suicide every 2 hours. Suicide is about 4 times more common in men than in women, though more suicide attempts by women.

Women are far more likely to choose drug overdoses as a method. In drug overdose there is a greater chance of intervention than in traditionally male means of attempting suicide such as hanging, gassing or firearms.

RISK FACTORS FOR SUICIDE

- Unemployed men are 2 to 3 times more likely to kill themselves.
- Certain occupations such as vets, Doctors, Dentists,
Pharmacists and Farmers are at high risk.
- Sing|e, widowed and divorced people are more likely to kill themselves than married and cohabiting people.
- About 10% of people with schizophrenia, 15% of alcoholics and 15% people with affective disorders go on to kill themselves.
- Young people with conflicts about their sexuality.
- Drug misuse and homelessness.
- Terminal or disabling illness and chronic pain.
- Family history of suicidal behaviour, loneliness and social isolation.

ETIOLOGY OF SUICIDE - Sociological Factors.
The first major contribution to the study of the social and culture influences on suicide was made at the end of last century by the trench sociologist Emile Durkheim. Durkheim divided suicides into three social categories.
1. Egoistic : Suicide applies to those who are not strongly integrated into any social group.

2. Altruistic: Suicide applies to those whose proneness to suicide stems from their excessive integration into a group with suicide being the outgrowth of that integration, e.g. the Japanese soldiers who sacrifices his life in battle.

3. Anomic : Suicide applies to those persons whose integration into society is disturbed, thereby depriving them of the customary norms of behaviour.

Psychological Factors :
FREUD'STHEQRY:
The first important psychological insight into suicide came from Sigmund Freud. In his paper, "Mourning and Melancholia", Freud stated his belief that suicide represents aggression turned inward against on introjected, ambivalently cathected love object. Freud doubted that there would be a suicide without the earlier repressed desire to kill someone else.

Physiological Factors:
(I) Genetics : A genetic factors in suicide has been suggested. Studies show that suicide tends to run in families.
(II) Neurochemistry: A serotonin deficiency, measured as decrease in the metabolism of 5-hydroxy indole acetic acid (5-HIAA) was found in a group of depressed patient who attempted suicide. Those patient who attempted suicide by violent means had a lower 5H1AA level in the cerebrospinal fluid than did those depressed patients who were not suicidal or who attempted suicide in a less violent manner.

TREATMENT:
To major of suicides among psychiatric patients are preventable. Some patients experience suffering so great and intense that their eventual suicide may be perceived as inevitable. Fortunately, such patients are relatively uncommon. Some other patients have severe personality disorders are highly impulsive and commit suicide apparently in an impulsive manner, often when dysphoric or intoxicated or both.

The evidence that inadequate assessment or treatment is associated with suicide indicates that the great majority of suicides of psychiatric patients are probably preventable.

The evalution for suicide involves a complete psychiatric history, a thorough examination of the patient's mental state and inquiry about depressive symptoms, suicidal thoughts, intends, plans and attempts.

The decision to hospitalize the patient depends on the diagnosis, the severity of the depression and the suicidal ideation, the patient's and the family's ability to cope, the patient's living situation, the availability of social support and the absence or the presence of risk factors for suicides.

Many psychiatrists believe that any patient who has made suicidal attempts, regardless of its lethality, should be hospitalized.

In the hospital the patient can receive antidepressant or antipsychotic medications as indicated. Individual psychotherapy, group therapy and family therapy are available and the patient receives the hospital's social support and sense of security.
Constant observation by special nurses seclusion and restraints can not prevent suicide if the patient is resolute.

Electroconvulsive therapy (ECT) may be neccessary for some severally depressed patient with the antidepressant drugs, who may required several treatment courses.

VERDICT ON SUICIDES :
Attempting suicide is again a crime:
Section 309 of the Indian Penal Code (IPC) states as follows:

"Whoever attempts to commit suicide and does any act towards the commission of such an offence shall be punished with simple imprisonment for a term which may extend to one year or with fine or with both."

In 1994, in support of the judgments of the High Courts of Bombay and Delhi, the Supreme Court of the Indian had declared section 309 of the IPC as unconstitutional. This judgement was considered huminitarian and sympathetic to the emotional needs of those who attempts suicide and was therefore widely hailed across segments of society, especially by the psychiatric profession.

It may be noted that there are strong moral and legal grounds to continue to hold the aiding of suicide as a crime. This is partly because the decision to commit suicide may be irrational influence by dysfunctional mental state and party because the abettor of the suicide may have a vested interest in the death.

LEARNING POINTS
Males are particularly likes to choose violent and "non reversible" means of killing themselves.
Loneliness, certain key occupations and psychiatric illness are all important risk factors for completed suicide.
Always include questions about suicidal ideas and plans in your psychiatric assessment.
Those left behind after a suicide need special attention for their own feelings of betrayal and sadness.
Suicide is exceedingly rare in children, but becomes much more likely after adolescence and in young adulthood.

Top

NEWER MODALITIES IN MANAGEMENT OF THELESSAMIA

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Haemoglobinopathies are diverse group of autosomal recessive disorders of haemoglobin production Amongst them B-Thelessamia form one of the commonest form single gene disorder in India.
Newer advancement in supportive and curative management are:

[A] Advance in supportive care :
(I) Pharmaceutical agents. The drugs under investigations are erythropoetin, Hydroxyurea. Butyrates or a combination of these agents Hydroxy urea administration result in an increase in foetal haemoglobin (Hb f) and R.B.C Indices (MCV-MCH) but not total Hb level. Trials of Butyrates and their derivatives have been still disappointing. Erythropoetin seems to induce production of greater number of Thelessemic RBGs rather than correcting underlying Alpha / beta / chain imbalance

(II) Oral Chelation
Oral Chelation is one of the important therapeutic advances which can significantly improve the quality and life of Thelessemic patients One drug which is under clinical trial for this purpose is 1,2 dimethyl-3 Hydroxypyrol-4-l(L 1)

(III) Anti Oxidants
Thelessemic erythrocyte membranes are thought to be damaged by free radicals formation and therefore the use
of free radical scavangers to reduce this damage to RBC is being investigated. The two antioxidants are currently under study, one is rutin the other is curcumin.

B. Newer curative Modalities:
(1) Innovative methods of Bone marrow Transplantation :
(i) umbilical cord - blood is rich in Haemopoetic precursors cells which are capable of producing newer RBCs in donor. The advantages of the use of cord blood over conventional bone marrow are the ease of collection, lack of risk to the fetus and less likely hood of latent viral infection
(ii) The foetal liver also contain haemopoetic stem cells. The number of stem cells retrieved from foetal liver is indeed small. But this source of haemopoetic stem cells is sufficient to reconstitute in the foetus. Using this technique of bone marrow transplantation, the recipient foetus must be very young preferably under 13 weeks of age.

C. Gene Therapy
Effective gene therapy require safe efficient and preferably transfer of functional B-

globin gene into human haemopoetic cells. Gene therapy could potentially cure Thelessamia without exposure to the risk of Bone morrow transplantation.

CLINICO- PATHOLOGICAL PROFILE OF CERVICAL LYMPHADENOPATHY

A Prospective Study Keywords, Cervical Lymphadenopathy F.N.A.C., Diagnostic Challenges

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Introduction:
Lymphadenopathy is an abnormal increase in size and/ or altered consistency of lymph nodes. It is a clinical manifestation of regional or systemic disease and serves as an excellent clue to the underlying disease.
Cervical lymphadenopathy (C.L.) is a fairly common clinical presentation. It is often a diagnostic challenge to medical professionals. The present study try to give an idea to proceed with such cases and also try to give insight to the medical professional about the overall quantum of the problem, diagnostic outcome and role of newer diagnostic methods including the FNAC (Fine needle Aspiration cytology) among patients presented with CL. CL can be presented as isolated or as a part of generalized lymphadenopathy.

Aims And Objectives:
"A study was carried out to know the overall prevalence of various causes responsible for C.L. of more than 3 weeks duration. Study was also carried out to know the distribution of various lesions among the age & sex groups. Study also try to evaluate the FNAC an diagnostic tool in our clinical setup.

Material And Method :
Consecutive patients presented with CL in our institute were recruited in the study. The patients having CL of less than 3 weeks duration having a history of (H/O) taking anti epileptic drug i.e. Dihydantoin sodium, having contraindication of FNAC, (Bleeding disorders, cardio respiratory failure) were dropped (excluded from the study). The major criteria of selection of patients was C.L. with more than 3 weeks duration of all age and sex group.
All patients were asked detail history pertaining to neck swelling and relevant questions to the etiological factors. Present past and family History of Tuberculosis, H/ O exposure for syphilis and AIDS and other relevant histories were asked. In the era of AIDS it is mandatory to take detail history regarding sexual exposure, homosexuality, drug abuse, (I.V), blood transfusion, etc. in young/ adult males. They all should be counselled systematically before advising ELISA, Western blot test for HI V antibody testing
Subjects were also asked for H/O rat bite, cat bite (Pets) etc. They had undergone clinical examination of CL i.e. size, shape, consistency, matting etc and extra cervical lymph

nodes. Other systemic and general examination especially for hepato splenomegaly, ascites, jaundice, bleeding tendency, skin rash, chest sign for T.B., abdominal mass., etc. were carried out in all patients.
The patients had undergone routine laboratory investigations i.e., complete Blood Counts, Peripheral blood smear, ESR, Bleeding time, clotting time etc.. If the haematological status were normal, all the palpable nodes were undergone FNAC examination for diagnosis of pathological lesion. The palpable cervical node was fixed with one hand and the skin was cleansed and 22 gauze -1.5 cm long need le with 10ml syringe was inserted into the lymph node and a full suction pressure was applied. The tip of the needle was moved around. The pressure was neutralized and the needle was withdrawn. The aspirated material was Expelled on the glass slides. The slides were fixed with Alcohol fixative for pathological examination.

CERVICAL LYMPHADENOPATHY
Table Showing Prevalence of various lesions responsible forC.L

Table No. :1

	No.S	%
I) Tuberculesis N=1	276	51.9%
2) Abscess N=2	50	9.4%
3) Lymphoma N=3	12	2.3%
4) Metastases N=4	34	6.4%
5) Reactive N=5	147	27.6%
6) Cystic N=6	13	2.4%
	N=532	100%

Table Showing Distribution of various lesions of C.LAmong Males & Females.
Table No. 2

Lesions	Male		Female	
	Number	%	%	Number
1) Tuberculesis	42%	(118)	58%	(158)
2) Abscess	64%	(32)	36%	(18)
3) Lymphoma	33%	(4)	67%	(8)
4) Metastases	85%	(29)	15%	(5)
5) Reactive	15%	(22)	85%	(125)
6) Cystic	69%	(9)	31%	(4)
		214	Total :	318
				N=532

Observation :
The present study over the period of January 1998 to December 1999* total 540 patients presented with CL were assessed clinically, by laboratory and by FNAC. Out of 540, 8 patients were dropped because of failure to aspirate the Material from lymph nodes. Among remaining 532 patients, age ranged from 3-91 -mean age 22.36 (S.D. 15.18). 216 were male (40.6%) and 316 were female (59.4%) FNAC was found to be simple, safe and convenient test without any single record of complication. The duration of CL was 1.5 to 14 months duration (Mean 4.5 months duration (SD 6.2)
Among the diagnostic outcome, 51.9% were having tuberculous lesions, while 48.1% were having non-tuberculous lesions. 8.6% were having malignant lesions while 91.4% were having benign lesions. Among the malignant lesions 26% were having lymphoma, while 74% 'were having secondary' metastases. Overall prevalence of various lesions were tuberculosis 276(51.9%). Abscesses 50(9.4%). lymphoma 12(8.3%), Secondary metastases 34(6.4%). reactive lesion 147(27.6%). cystic lesion 13(2.4%). Tuberculosis and lymphoma were more common among the females, while abscesses and secondary metastases lesions in cervical lymph nodes were more common among males. All other observations are summarized in table No. 1,2.

Discussion :
The study documented the fact that out of 532 patients 46 patients (8.6%) had malignant and 486 patients (91.4%) had benign lesions. Among the benign lesions the tuberculosis lesions (nl= 276) ranking on the top followed by reactive nonspecific chronic inflammation 147 (27.6%) followed abscesses n-2 50 (9.%) followed by metastases lesion n4=34(6.4%) following by cystic lesion 116= 13(2.4%) and lastly the Lymphoma n3=12 (2.3%) Table No. I

Actually very few studies are done to analyze the prevalence of pathological lesions and etiological factors for CL. In the study by steel et al; in their series of 1103 patients performed FNAC for lymphadenopathy, found 593 as malignant, 399 as benign and 91 as suspicious. In 120 cases the material was unsatisfactory. The authors concluded mat aspirate for supraclavicular nodes were more likely to be malignant (67%) in their series. According to them the most challenging lesions were lymphoma. With tjje use of newer, immunocytochemistry technique the lesions can be well interpreted by FNAC. The second study was performed by Bhattacharya et al for FNAC for diagnosis of tuberculosis. The authors concluded that FNAC is very useful adjunct in the diagnosis of T.B. Diagnosis of T.B. can be made by the demonstration of epitheloid grannuloma (lymphoid cells, epitheloid cells and giant cells with or without caseation) even in the absence of AFB. The authors further recommend that necrotic features whether acellular or accompanied by neutrophilic infiltrate are usually misdiagnosed as suppurative abscesses. Such smear however show high AFB positivity and the diagnosis of tuberculosis is still possible even in the absence of Typical epitheloid grannuloma. Therefore all smears / aspirate obtained by FNAC of suspected T.B. shall be subjected to ZN staining for AFB. It is further emphasized that tuberculosis is very common in India and in all cases of CL, all efforts must be done to rule out tuberculosis. High index of suspicions is required. Kirn S et al suggested that PCR(Polymerized Chain reaction) test

for mycobacterial DN A study on aspirated material is 100% specific and sensitive test for the diagnosis of tuberculosis.

Pyogenic abscesses are still common in our country (n= 50/9.4%). Such material should be sent for microbiological/ bacteriological examination. Such lesion may require surgical intervention i.e. excision, drainage and proper antibiotic therapy after culture sensitivity test.

Lesions diagnosed as reactive (n= 147/27.6%) are non¬specific chronic inflammatory lesions and are usually benign. But such lesions require further clinical examination for the evidence of septic / infective focci in head and neck i.e. otitis media, tonsillitis, dental, sepsis, scalp lesions and other chronic dermatosis. Such lesions worth to observe closely at regular interval with reassurance. During observation period if any other new clinical picture develop require further, diagnostic workup.

In children and young adults chronic inflammatory lesions can be of tuberculous origin if other clinical findings, i.e past history, tuberculosis lesions in lungs are the coexisting clinical clues. If such lesions should undergo biopsy, the material should undergo bacteriological examinations and culture study. Saskind et al followed such 81 children with non- tuberculous cervical lymphadenopathy and found that 54 of cases the responsible organism was non tuberculous mycobacteria. The typical clinical presentation was non-tender cervical lymphadenopathy and found that 54 of cases the responsible organism was non tuberculous mycobacterial. The typical clinical presentation was non-tender cervical lymphadenopathy of long duration unresponsive to antimicrobials and AKT. (Ami koch's treatment). All underwent surgical excision which was curative in 66%. The remaining children require additional diagnostic workup. Non turberculous mycobacteria and atypical mycobacteria pause a great difficulty in diagnosis and management As very often atypical mycobacteria are resistant to common anti- microbial and AKT. In such cases the surgical excision is the choice of treatment. This may be the typical clinical scenario in immunologically compromised patients. Fit Z patrick New orleons(USA) remarked that tuberculosis of Lymph nodes have been shown to be rising in USA also. He described that both tuberculous and non- tuberculous mycobacteria can be responsible for cervical lymphadenitis.

Malignant causes of CL are both diagnostically and prognostically important. 46 out of 532 cases (8.6%) were malignant lesion responsible for CL in our study. Our of 46. 12 (26%) were primary lymphoma and 34(74%) were secondary metastases.

Metastatic malignant lesion of CL is more common in male (85%) and among the age group more than 50 yrs. In metastatic lesions FNAC not only help to detect the lesion but also gives clue to the physician about the primary focci. Metastases of unknown origin (MUO) is a clinical diagnostic challenge and often manifest as CL. Reyes et al study with FNAC in metastatic CL, the microscopic study was complemented with Diffquik, pap smear, immunostains, electron microscopy and cells were typed (classified). See the table No.3 Regarding the clinical correlation, small cell carcinoma suggesting of originated from lung. Squamous cell carcinoma were originated, from head and neck. The following

table showing comparison of Reyes's study with our's study regarding metastases.

Metastases :

	No.% Reyes's n=115	No.% Our'sStudy n=34
Adenocarcinoma	60 (52.1%)	05 (14.7%)
Squamous - cell Ca.	23 (20.0%)	17 (50.0%)
Small cell ca	26 (22.6%)	0 (0%)
Undifferentiated ca	06 (5.2%)	07 (20.5%)
Follicular/papillary ca	O (0%)	03 (8.8%)
Neuroblastoma	0 (0%)	01 (3%)
pleomorphic Sarcoma (3%)	0	(0%) 01
	n=115	n=34

Primary malignancy of lymphnodes i.e. lymphoma both Hodgkins's lymphoma and NHL (Non Hodgkins lymphoma) were 12(2.3%). Though their prevalence is low, they pause a great diagnostic challenge In our study all the cases were associated with some systemic symptoms i.e. fever, fatigue, weight loss, night sweats, aches, pruritus malaise, anorexia. Though the 34% of tuberculosis CL were also associated with systemic symptoms. In both the condition the matting of lymph nodes is common feature but softening and abscess formation is the feature of TB lymphadenitis. Once the lymphoma is diagnosed one should proceed for staging of the disease by, appropriate investigation, i.e. history of systemic symptoms, examination of all lymph node areas, liver, spleen study. Liver function test, Kidney function test, x-ray chest, lymphangiography, 'Computerised tomography scan of chest, abdomen and pelvis for lymphadenopathy, spleen scan 99m Tc., bone scan 99m Tc., immunological profile. Laproscopy and exploratory laprotomy may be required for staging of the disease and multiple lymphnode biopsy, wedge and cone biopsy ofboth lobes of liver, splenectomy (Preceded by pneumococcal vaccine) oopheropexy in young reproductively active woman (to Prevent radiation injury) Advantages of Splenectomy are to avoid problems of Hypersplenism, to avoid radiation injury to left kidney and left lung.

IMAGING OF NECK

Because of their non- invasive nature, more and more studies are coming regarding the role of sonography, colour dopplcr and CT scanning in the evaluation of CL. Their role is under evaluation but when CL lesion is cystic in nature, FNAC can Safely be carried out under guidance of sonography. When the Cervical lesions cannot be confirmed , clinically of originated from lymph nodes, sonography gives further guidance the site and nature of the lesions.

Giuffrida D et al found sonography examination highly informative to differentiate whether the cause of CL is benign or malignant. An oval shape with central ecogenic hylus indicate benign lesion where as roundness with absence^ of central ecogenic hylus

indicate malignant lesion. Na D.G et al described the role of colour doppler sonography in differential diagnosis of CL, depending upon the vascular pattern.

Van den Brekel et al concluded in their review article about the role of imaging of neck in diagnosis of occult lesion of neck and staging the neck in cancer patients and to lesser extent help to differentiate swelling in neck (cervical mass lesion). The extension of tumours can be depicted, and assessment of operability can be predicted though not very reliable. Conventional imaging techniques such as CT,-MRI (Magnetic resonance imaging) U.S., are rapidly evolving by improvement in resolution of newer contrast and specific agents. U.S. guided aspiration is currently one of the most accurate technique to assess the occult metastases. To over come the limitations, new imaging modalities such as immunoimaging with SPECT. thallium SPECT. PET and Fused imaging are rapidly developing and proved to be useful in diagnosis of CL. Though these techniques; will probably become very accurate in staging of cervical mass & in differential diagnosis of CL. The cost and availability are the limiting factors. Their role will be in detection of unknown primaries, distant metastases. and follow up after radiotherapy, chemotherapy & surgery. These methods are also useful to differentiate the thyroid cancer from CL.

In clinical setup P.U.O. (pyrexia of unknown origin) is also pause a diagnostic challenge. In such situation, de clein et al in their study on P.U.O. remarked that repeating through the clinical history, physical examination and waiting for potential diagnostic clues (P.D.C.) to appear is probably better than ordering more and more investigations in the hope that something abnormal will come up. CL may come out ad P.D.C. In such situation common diagnosis are T.B.,S.L.E.(SYSTEM1C LUPUSERYTHOMATOSUS), Rheumatoid Arthritis, Lymphoma, Toxoplasmosis, Infectious mononucleosis, C. M.V.,., (cytomegalo virus) HIV/AIDS, PGL. (persistent generalised lymphadenopathy). In our study about 2.6% of the CL presented with P.U.O..

Conclusion:

The study concluded the fact that the tuberculosis is the most common cause of cervical lymphadenopathy. In our set up 51.9 % of patient of CL were suffering from tuberculous cervical lymphadenitis. Though in about 48.1% of patients the non-tuberculous causes were responsible lesions for the CL. In patients with CL one should wait for 3 weeks to rule out common viral infection. In such patients, one should study the blood counts and peripheral smears, careful for various types of haematological malignancy i.e. leukemias and if needed, supplemented with bone marrow examination. If CL is of more than 3 week duration and the haematological status is normal, than instead of giving empirical (therapeutic test) with AKT, patients should be considered for FN AC. FN AC is found to be safe & simple in diagnosing the lesions responsible for CL including the tuberculosis. Not a single complication is recorded during the study with FN AC. If FN AC adjunct with bacteriological, immunological and PCR test, the accuracy of diagnosing the tuberculosis is 100%. FNAC is extremely useful in certain clinical setup i.e. metastases of unknown origin, pyrexia of unknown origin, symptomatic and a symptomatic, cervical mass lesions. CL is not uncommon clinical presentation in clinical practice. All patients should be carefully examined for cervical lymph nodes enlargement. High index of suspicion is essential in clinical setup. The detail clinical examination for lymph nodes,

Supplemented with routine laboratory examination and FNAC give very important clue to the medical professionals among patients presented with cervical , lymphadenopathy.

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HETEROGENOUS NATURE OF DIABETES MELLITUS

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Diabetes Mellitus is a chronic and life long disease with its own difficulties in diagnosis and management. The patients with diabetes mellitus require a wise physician who takes into account all the aspects needed in diagnosis and management of diabetes. Our understanding of this disease is still far from complete and diabetes has always been an exciting area to work in.

Diabetes and its complications are the third leading cause of death in the United States, accounting for 3,00,000 lives per year. It can occur at any age, in any individual-obese or thin, of any socio- economic status, though more often it is seen in obese patient with a positive family history.

There are many controversies between 'loose' versus 'tight' diagnosis and between 'loose' versus 'tight' treatment. These items form basic differences. Something new may come out in the next decade or two.

It is not correct to say that only the obese and those eat more are likely to be diabetic; many of them are non diabetic, and lean and thin persons do develop diabetes. Even those persons whose family history showed the following percentage Prevalence;. Obese subjects- 9.27%, normal weight persons, 5.06%, and lean and thin persons 1.027%. It can occur in active persons like farmers and laborers, Overnurished and less active people are more prone to have diabetes mellitus In one study, the prevalence in higher income group was 9.7%, while in middle and lower income groups, it was 2.6% and 1.46%, respectively. It can occur in any race, but the prevalence shows considerable variation in different parts of the world and it is due to environmental factors. Therefore, hereditary along with environmental factors should be considered together and not individually.

A remarkable difference in prevalence rate was seen in the genetically similar groups of subjects who were living under different environmental conditions. One must understand that there is a growing evidence to suggest that diabetes mellitus is heterogenous in etiology, clinical presentation, susceptibility to complications and response to treatment.

The spectrum is so wide that diabetes mellitus is presently recognized as a syndrome complex rather than a disease entity.

What the mind does not know, the eyes do not see or if they see, do not register. So for the proper diagnosis of diabetes, a knowledge of the protean manifestations and high index of suspicious are essential.

II ANNUAL CONFERENCE OF IAPSM
Gujarat Chapter, January 17,2000

Dr. K. N. Trivedi- professor &H.O.D Department of Preventive and Social Medicine,
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A BRIEF REPORT

It was a matter of pride and honor to host the VII Annual Conference of IAPSM, Gujarat chapter at Smt. NHL Municipal Medical college, Ahmedabad on 17th of January 2000. Dr. K.N. Trivedi, Professor & Head, P & SM department was organizing secretary. More than 100 delegates from all over the Gujarat attended the conference. Mr. Arvind Pullikal, LTNFPA, State Programme co-ordinator was the Chief Guest and Dr. C.A. Desai, Dean, Medical faculty, Gujarat University was the guest of honer. Dr. C.R. Trivedi, former associate professor from Department of P &SM, Smt. NHL Municipal Medical College delivered Keynote address on "The Challenges for Medical Education in this millennium." Total 9 papers were presented during scientific sessions and 7 posters were displayed.

(A) Papers :

Among papers Dr. D.V. Bala from Gujarat Cancer Research Institute presented her paper on Screening for cervical cancer in Panchmahals District of Gujarat and in G.C.R.I. In her study 15,890 women (1.70% of total female population over 15 years of age) were screened for cervical cancers of whom 15,236 were subjected to PAP smear. Cytological abnormalities were present in 199 (1.31%) cases and 52(0.34%) smears were positive for malignancy. Low grade dysplasia (C.I.N.I) including H.P.V. Infection, classified as or L.S.I.L., constituted 69 (0.45%) cases. High grade dysplasia (C.I.N.-II AND C.I.N.-11I), classified as H.S.I.L., accounted for 63(0.41%) cases. Additional 23 invasive cervical cancers cases were detected either clinically or by biopsy. All the grades of dysplasias were lower in the women in the District as compared to G.C.R.I. Dr. Sheetal Vyas from Smt. NHL Municipal Medical College, Ahmedabad, Presented her paper titled "An assessment of Oral Rehydration therapy education programme for childhood diarrhoea scheduled for reproductive age group women of PHC Uvarsad, Dist. Gandhinagar." The Study was conducted amongst 380 reproductive age group women belonging to 7 different villages of PHC Uvarsad. Proportion of women who could tell something about treatment of diarrhoea increased from 83.68% to 92.55% as a result of training (d-3.81, $p<0.001$). Quantitative assessment showed rise in mean score from 5.96 before training to 9.23 after training ($z=10.50, p<0.001$.)

Dr. H. G. Thakorfrom Govt. Medical College, Surat presented his study titled "Physical growth standards for urban adolescents (10-15 years) from South Gujarat". The study was conducted amongst 2250 children (1092 boys and 1158 girls) aged between 10-15 years

from 12 primary schools of Surat city. Appraisal of nutritional status adjusted by the Weight, Height and BMI revealed that mean parameters of this population were comparable to the ICMR standards, but were far below the 50th percentiles of NCHS standards.

(B) Posters:
Among the posters displayed Dr. Jay K. Sheth from Smt.NHL Municipal Medical College, Ahmedabad, poster on the " base line study of waste generated at Sheth V.S. General Hospital." The poster included the aims and objectives of the study as well as nicely presented tabulated data, graphical analysis and description of the outcome, photographs of the study and major aspects of conclusion. The study was a part of the Hospital waste management project -A WHO- Government of India collaboration. The aim of the study was to evaluate both the type & quantity of waste being generated in different sections of Sheth V.S. General Hospital. During the study the mean total weight of the waste generated was found to be 756.93 Kg/day & the average waste generation per patient per day was found to be around 825 grams. During the qualitative study of the system "Sorting" was found to be one of the problem areas in the existing waste management system as it was being done while collecting the waste and not at the time of generation.

Second poster was of Dr. Rachna Kapoor from Smt. NHL Municipal Medical College, Ahmedabad, for her poster on the study of knowledge and attitude of people of various slum areas of Ahmedabad city regarding Viral Hepatitis. The study revealed that most of the study population (69.1%) did not know anything about the mode of spread of viral hepatitis. Only 25.5% people knew that viral hepatitis can spread by contaminated drinking water. 9.4% of the study population believed that be viral hepatitis can be prevented by improving personal hygiene and by drinking safe water. The Scientific sessions were followed by general body meeting of IAPSM Gujarat Chapter. Lt. Col. Dr. A.R.N. Setalwad, Dean, Smt. NHL MMC, Ahmedabad was selected as President & Dr. G. P. Kartha, Assistant Professor, BJMC, Ahmedabad was selected as Secretary IAPSM-Gujarat Chapter for the year 2000. At the end there was prize distribution ceremony. The conference concluded with the valedictory function.

A CASE REPORT OBSTRUCTIVE UROPATHY - PREGNANCY INDUCED OR OTHERWISE ?

Dr. Babu S. Patel, M.D. (ob/gy), Asst. Prof, of ob/gy
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A 24 Years old patient Presented on 07-07-98 with 4 months amenorrhoea, inability to pass urine for 3 days & low grade fever off & on for 15 days. She has one full term normal delivery before 5 Years. No other significant history was obtained. On examination - No abnormality was detected & pregnancy of 14-16 weeks was confirmed. Simple rubber catheterization was done but no urine was drained.

She was admitted & investigated. Her reports were :-
A+ve, Hb: 10.9 gm% TC: 6500/cmm DC: 61/37/017 01/00

Blood urea : 120 mg% S. Creatin : 6.8 mg % other reports were within normal limits.

Ultrasonography of abdomen :-

Liver/Gallbladder/ Pancreas/ Spleen-Normal. No ascites.
15 weeks live pregnancy, Normal placenta on Anterior Surface, Adequate liquor, No congenital abnormality.
Kidneys:- Bilateral gross Hydronephrosis & gross hydroureter

		Rt.Kidney	Lt.Kidney
Size	12.8X	8.3 cm	13.3 x 6.2 cm
Cortical thickness		8-9 mm	2-3 mm

Empty Urinary Bladder.

Cystoscopy was done on 9-7-98 which showed- both 'Ureteral orifices blocked & ureteral catherteization not possible.

Bladder & Urethra normal.
Diagnosis of four months Pregnancy & post obstructive Renal Failure with Bilateral hydronephrosis was made.

Ultrasonography guided Percutaneous nephrostomy on right side was done on same day. Pus like fluid was drained.

On 10-7-98, open nephrostomy on left side done & no.6 F open end ureteral catheter directed upto bladder from pelvis of the kidney. Pus like fluid from no. 24 F catheter of nephrostomy was draining.

On 18-7-98 her renal functions worsened further-blood urea: 160mg%, S. creatin: to 11.0 mg%

So dialysis & surgical intervention was planned as her right sided nephrostomy has stopped draining. But Urologists & Nephrologists advised termination of pregnancy for better management. Extra amniotic Emcradyl instillation was done on 20-7-98. She aborted after 42 hours without any complication.

Peritoneal dialysis was done on 25-7-98 & her renal functions were-blood urea: 160 mg %, S. creatin: 8.0 mg%.

Then patient gradually started urine output from urethral as well as left nephrostomy to catheter. Right kidney was not functioning. No other cause of urinary obstruction was detected.

She improved dramatically with conservative management & her renal function tests on 4-8-98 were-blood urea: 50mg%, S. creatin: 2.2 mg% & Urine output: 3600 ml (diuretic phase).

Patient was discharged on 27-8-98 with normal renal function & without any complication. LeftNephrostomogram afterwards showeJ normal kidney size without any abnormality which was supposed to be non-functioning initially

"TOXICOLOGY"- TODAY GUEST ARTICLE

Dr.Aruna Diwan M.D. Dep. Director National Institute of Occupational Health Ahmedabad-380 016.

Poison Information Centre at NIOH, Ahmedabad. Provides expert guidance and treatment recommendations -to medical personnel handling patients of poisoning. Initially, patients were being referred only from few hospitals of Ahmedabad city but now private hospitals, nursing homes, general practitioners of not only Ahmedabad but from other parts of Gujarat seek help from the NIOH poison information center. Investigations for identification of pesticide and metal poisonings are also undertaken at the NIOH. The Center also carries out market surveys for common poisons and availability of antidotes. Teaching in clinical toxicology and toxico vigilance are the other main activities of the Center. Based on the types of poisoning reported to the NIOH center, poison information cards have been prepared on pesticides and industrial chemicals to serve as quick reference material for health personnel.

The following are the main observations of the Center:

1. Acute poisonings are very common and patients are admitted to the emergency wards almost daily. The patients often arrive very late when referred from rural areas leading to high morbidity and mortality.
2. Pesticides, both household as well as agricultural, are the commonest cause of poisoning. Mortality is much higher with agricultural pesticides. Though organoposphates are responsible for the bulk of pesticide poisonings, other pesticides such as organochlorines, synthetic pyrethroids and herbicides are frequently encountered. A variety of industrial chemicals are also responsible for many instances of poisoning.
3. Simple diagnostic tests such as plasma cholinesterase levels are not done in any of the hospitals. Most pesticide poisonings are treated as organophosphate poisonings. However, with the establishment of the poison Information Center at

N1OH, physicians avail its services for the identification of the pesticides and also request for cholinesterase assays.

4. Teaching or training in clinical toxicology, both at the undergraduate as well as at the postgraduate level is limited in some medical colleges.
5. Simple remedies such as syrup of IPECAC and activated charcoal which is recommended for most ingested poisons are not easily available in India. Very few antidotes are available even in big cities in India.
6. Many of the pesticide formulations are sold unlabeled in the market making it difficult for patient management. Some of the pesticide containers had incorrect information about antidotes which led to complications in many patients.
7. Occupational poisonings are quite common but are not reported due to various reasons.

In a country as large as India, it may be necessary to have a number of regional poison information centres. Many research institutes in India not only have fully equipped analytical laboratories.

This article is summary of lecture delivered by Dr. Aruna Diwan on toxicology to day, on occasion of inauguration of first volume of journal of A A.B.M.S.

Source: W/C ICMR bulletin Delhi

"NEONATAL CARE SERVICES IN INDIA"

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INTRODUCTION

Throughout the life span of an individual, perinatal period is of great danger as regards survival and freedom from handicap, yet it was the last one to be recognizes as of any importance in improving the health of the society.
As opposed to geriatrics, death during this period .truly represents a nipping of life in the bud and sequence of various neonatal hazards manifest as a life long disability.

The developed countries launched neonatal intensive care programmes in late sixties and beginning of seventies which resulted in survival of newborns of very low birth weight, previously considered not viable. However In India, we are still struggling to get minimal care facilities for our neonates.

Neonatology has emerged as a most fascinating and challenging medical speciality over the past twenty five years. Understanding the diseases of newborn has posed a challenge to pediatricians. Until the 1960's, the practice of neonatology was based on pure clinical sense and supported by one's experience. Management of newborn was based on trial and errors. Since I960's Neonatal medicine has fast developed into a well established science. Physiological and Biochemical aspects of fetus and neonate are quite different from older

children and adults. Therefore, it is very essential ' to utilize the basic knowledge of the disease for the betterment of the neonate. It is of practical importance that all practicing physicians (Pediatricians) are provided the physiologic basis of neonatal medicine.

Neonatal Mortality:
The infant mortality rate of our country has declined gradually from 165 per 1000 live birth in 1950's to 84 in 1991 and 74 in 1993. In the other hand, the neonatal mortality rate has been almost static. Following good immunization coverage, implementation of programmes for improvement of nutrition and control programmes for various disease like diarrhoea, acute respiratory tract infectious and other infectious diseases. Post neonatal mortality has decreased, the decline of infant mortality rate of our country is mainly due to decline of post neonatal mortality.

Since last few years there is no significant decline of infant mortality rate of our country. And more than 60% of .the infant deaths take place during neonatal period. So for further reduction of infant mortality rate of our country, besides present programmes, Steps should be taken to bring down neonatal mortality rate.

In order to plan the strategy to reduce neonatal mortality rate and for proper priority of resources, it is important to know the contribution of various factors to neonatal deaths.

Birth Asphyxia, prematurity, infection and congenital malformations are the leading causes of deaths in the newborn. Lower birth weight categories comprise a higher proportion of neonatal deaths.

Development of Neonatal Services :
With knowledge of all these facts and ideas, pediatricians of our country have gone through 25 years of preparation leading to crystallization of thought process which has resulted in guidelines based on indigenous experience. The world Health Organization (W.H.O.) and Ministry of Health conducted a series of workshops on basic neonatal care for pediatricians and Nurses during 1960s & 1970s. This resulted in the creation of a band of pediatricians committed to development of neonatal care in the country. Some of them went through extended advanced training in Western countries and set up modern neonatal care units in their respective hospitals in various parts of the country. During last two decades, increasing number of Pediatricians have shown a positive interest in neonatology. Besides at Teaching institutions, well equipped Nurseries are coming up at private sector also.

Medical Education and Neonatology :
The inclusion of "essential newborn care" as an integral part of national programme and acceptance by the Medical Council of India of pediatrics as an independent discipline in undergraduate medical education has totally changed the perspective and the need for neonatal care in India for the coming decades.

With launching of D.M. (neonatology) Programme at some of the centres in the country and likely to be introduced in many more centres in the next decade, leadership base of the speciality is going to expand.

Delivery of Neonatal Care In India :
It is paradoxical that inspite of increasing interest in neonatology among Pediatricians, there is little impact on Neonatal Mortality Rate. This is largely because of the fact that nearly 95% of the deliveries in the rural and around 50% in the urban areas are being conducted at home. In this situation the three tier system of newborn care as recommended by the task force on Minimum Perinatal care of Health & Family Welfare, Government of India is emerging as the most suitable method of delivery of neonatal care in our country.

Primary Care (Level I Care):
Three tier system provides for primary or. level I care in domiciliary, sub center or primary health center situation through the primary health care provides such as the trained traditional birth attendants, auxiliary nurse midwives and general physicians. The national birth giving pattern of over 75% home delivery and fewer center of institutional based deliveries is unlikely to change in the near future. Hence, current Government policy of delivery of essential newborn care from grass root level should continue till this care becomes uniformly available all over the country. The policy of double efforts of training of health professionals and providing the tools to practice the knowledge and skills and for actual care of the newborn is appropriate and must continue. Primary care should remain the focus with major resources inputs into it as this is likely to yield positive results and provide firm roots for future development of newborn care.

Secondary Care (Level II Care)
We initiated newborn care in the late fifties and sixties by providing hospital based neonatal care as secondary or level II care. Initially it was primitive, but during last two decades it has improved a lot at the government and non government levels. It is logical and natural that as concept -of essential newborn care gets spread widely, there will be increasing need and demand for level II units at district and taluka level. In some parts of the country, level II care is developing and improving very fast at private sectors compared to government level.

To improve level II care, trained manpower, physical space and equipments are basic requirements. Trained manpower especially the nurses, is the hardest constrain to development of secondary or level II units. It is in this context, the the concept of participation by the mother in the care of newborn under close supervision of trained and experienced neonatal team of nurses and pediatricians become extremely relevant. Devising simple methods for sucting the airway of baby, use of room heater for preservation of developing hypothermia to the newborn, rather than going for costly sophisticated gadgets, is also cost effective. Such type of approach ensures establishment of newborn care units at minimal and affordable cost is most practical.

The experience of nursing by mother in the hospital under supervision provides the confidence and opportunity for her to learn the appropriate and suitable ways of looking after such infants.

Tertiary Care (Level III Care):
With the concept of neonatal services in a phased manner, we have realized that for real intensive care of the critically ill neonates, development of tertiary care centres of Neonatal Intensive Care Units (NICU) is essential. The pioneering efforts in successful delivery of tertiary care in early eighties by Safdurjung Hospital Neonatal Unit team at Delhi provided the necessary impetus for the beginning of such a unit at an apex institution or hospital in the government and non government organization become a growing demand and necessity. During the last decade, many such centres have come up across the country.

The goals of a NICU are (a) to improve the clinical 'care of the critically sick neonates, (b) to reduce the neonatal morbidity and mortality and (c) Impart continuing in service of training personnel in the care of the newborn.

The bed strength is determined by considering the approximate need of the regions with number of deliveries, incidence of very low birth weight babies and neonatal mortality. It has been calculated that there should be 1.5 intensive care cots and 5 high dependency and special care cots per thousand births per year. This apex institution should have all the intensive care cots for its catchment area and take into account the high dependency and special care facilities available in neighboring district general hospitals.

N.I.C.U. must be equipped with centralized oxygen supply, suction facilities, servo controlled open care system/ incubators, vital signs and transcutaneous' monitors, ventilators, infusion pumps etc. Since such services are very expensive and hitech, a great interest and planning are required to organise the unit taking into consideration the available resources, medical and nursing personnel, space and equipments and other, supportive services. Good laboratory and investigative facility is quite essential. Making proper policies regarding administration, emergency protocols, infection control, medication administration, procedures and N.I.C.U. routine practices is vital for optimal patient care. Documentation, Education Programmes and follow up programmes are the key to success of any N.I.C.U. services and immense help not only in improving the existing services but also for future planning and development.

Needless to say, N.I.C.U. should be supported by matching obstetric services providing optimum ante natal care, ideal intrapartum care and safe and prompt delivery and caesarean sections.

The technology of neonatal care has advanced tremendously in Western countries, still it is in its infancy in our country. Although an increasing number of pediatricians have shown positive interest in neonatology, the standard of care of the newborn is widely different across the country and it is not satisfactory. We have to go a long way in the coming days.

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WHO-MESSAGE WORLD HEALTH DAY 2000 : BLOOD SAVES LIVES

W/C Dr.Aparajita Shukia (M.D.) Asst.Prof. P & S.M.
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"World Health Day 2000" has been dedicated to the theme of Blood Safety.
The key messages of World Health Day 2000 are : There is a positive health impact from safe blood There is a need for more safe blood donations
Effective and appropriate measures are needed to prevent the transmission of blood born diseases
Donated blood must be used safely and appropriately to ensure patient safety, and to demonstrate a respect for the donor.

As a result of WHO- 2000, we expect:
An increased awareness among the public that blood donation is a safe process, and that the donation process is handled in confidence and professionally.

An increased awareness of the need for blood and therefore an increase in regular blood donations.

Health professionals and the public will be more informed and able to make rational decisions on the need for blood transfusion.

Government authorities and stakeholders will be more informed of the need for an enabling environment for blood services to be able to deliver safe and adequate blood supplies.

The objectives of World Health Day 2000 are:
To raise awareness of blood safety issues globally to encourage Member to commit and support national blood programs and implement national blood legislation or a legal framework for a national blood program to ensure the provision of safe blood

To promote and retain donations from voluntary (altruistic),

Non- remunerated blood donors from low risk .populations

Some Facts:
Between 5% and 10% of H1V infections worldwide are transmitted through the transfusion of contaminated blood and blood products.

Worldwide, approximately 75 million units of blood are collected annually. Of these, only 40 million (53%) are collected from voluntary non remunerated blood donors..

Each year, approximately 18 million units of donated blood are not tested for transfusion-transmissible infections.

80% of world's population live in developing countries, but use only 20% of the world's blood supply
While millions of lives are saved through blood transfusion, a safe blood supply must be guaranteed to avoid transmitting infection.

List of Activities :
One of the objectives of "World Health Day 2000" -with its theme on blood safety is to raise awareness of blood safety issues globally. To achieve this objectives, all key players-health professionals, public, policy makers, politicians, young people, governmental agencies, non¬governmental organizations, international agencies, the private sector and others-are encouraged to organize various activities.

Although, there has been a myriad of ideas proposed to celebrate the WHO 2000, it is important for individual countries to prioritize these so as to make a real impact Recording to what resources are available in term of funds, manpower, material, time and methods. Events should, whenever possible, be centered around existing networks (blood transfusion services, educational establishments, health centers, specialized interest groups, etc).

Below is a suggested list of activities:

1. Organization and management
Arrange a panel discussion on TV and/or radio made up of representatives of the national blood service, blood transfusion experts, prescribers of blood, public experts, scientists (such as members of professional bodies,) patients societies (such as national thalassemia or haemophilia societies) to discuss issues on blood safety and use of blood.

Create and launch a national web-site on national blood transfusion services, advertise it widely, and create an e-mail address for responses and comments from community Speeches by dignitaries and press releases with messages on blood donation. Telecast of video films based on the stories of patients whose lives were saved by blood transfusion Telecast of video spots moderated by celebrities with

-Messages of thanks from recipients
-Donors, experiences
-Donors' interviews
-Quiz programs
-Press conferences/press release.

Encourage nationally-based television or radio "soaps" (weekly serials about people's lives) to write into their story lines some aspects about safe blood and transfusion services Publish letter of thanks from government to donors in local newspaper.

Messages of thanks from recipients (on website, in newspapers, in hospitals).

2. Voluntary blood donor recruitment.
National appeal to enrol as voluntary blood donors school students as target groups to develop" Pledge 25 clubs" among scholars (i.e. they form this club, get T-shirt/ caps/Badge and then they pledge to give blood at least 25 times even after they leave school- and they will encourage others to become voluntary non- remunerated donors, Poster drawing campaign among school children with prize from national airlines for a free flight for children and parents for winners.

Flash video messages on importance of voluntary regular blood donation on mass media- TV, radio with information on action to be taken by the viewers Information messages related to WHO 2000 and blood safety on mass media- newspapers, magazines, with complete information on where to go for blood donation.

'A walk of life1 or a run for blood donor awareness by the youth (student nurses, youth blood donor clubs and selected school children and distribution of WHO kits containing brochure on blood safety, stickers, posters and CDs, if available or distribution of promotional and educational material- posters, calenders, stickers, T-shirts, banners, mugs, leaflets, etc.
Flags with blood safety message including the WHO and Red Cross logo on important national building . Flags and banners on public transport buses.

Organize schools essay/slogan/poster competitions: winners to be awarded it could promote the idea of giving your first donation of blood on one's 16/17/18/19th birthday.

Donor recognition and reward functions.

Educational talks and launching of special focussed programs in schools, colleges, institutions and universities.

Release of balloon with message.

Launch a help line and/or hot line for information about blood donation.

3. Appropriate screening of blood
Organize training programme in 'Quality Assurance in Blood.

Transfusion Libratory for medical and laboratory staff in blood transfusion services.

Talk by Blood services for schools and public on TV/ Radio on important of screening, good laboratory practice and quality assurance.

Give a guided tour of the blood service to TV producers to produce a documentary for WHO.

4. Effective clinical use of blood.
Organize a training programme on 'Effective clinical use of Blood' in hospital for clinicians from blood user departments.

Talk by Blood service for schools and public on TV/ Radio on the importance of effective clinical use of blood by prescribers of blood.

Get local medical associations to have lectures presented at clinical meetings on day or week of WHO on theme of appropriate blood usage and use of alternatives for fluid replacement such as crystalloids and colloids.

MEDICAL SCIENTIST QUEST

KOCH, ROBERT(1 843-1910)
KOCH, ROBERT was Born in Clausthal, Hanover, the son of a mining engineer, he qualified at Gottingen in 1866, Henle* and Meissner* having been among his teach¬ers. He was initially in general practice in Niemegk and Rakwitz, becoming an army surgeon in the Franco-Prussian War (1870), and later a Medical Officer of Health. In 1876 he proved for the first time that a specific micro-organism. By 1881 he had solved the problem of pure bacterial cultures, through Lister* had been the first to obtain a pure culture of a bacterium three years earlier. In 1885 he became Prof, of Hygiene in BerI in & then from 1891 to 1904 Director of the Institute for Infectious Diseases, receiving the Nobel Prize in 1905. He discovered the tubercle bacillus in 1882, the cholera vibrio in 1883, and tuberculin in 1890, and travelled the world investi¬gating the causes of epidemics of cholera, plague, malaria and sleeping sickness. He was ennobled by the state with the title of Excellenz, became a foreign FRS in 1897, and died of cardiac failure on Berlin. His ashes are in his institute.

KREBS, SIR HANS ADOLF.
Krebs, Sir Hans Adolf. was born in Hildesheim, Germany, he studied medicine (MD Hamburg 1925) then chemistry, and worked in Berlin as a chemist, then as lecturer in internal medicine at Freiburg. He tied the Nazi regime to En¬gland in 1933, working first at the Biochemical Laboratory at Cambridge, then became Prof, of Biochemistry, Uni. of Sheffield, and in 1954 became Whitley Prof, of Biochemistry at Oxford. He was elected FRS in 1947 and was knighted in 1958. He shared the 1953 Nobel Prize with F. A. Lipmann for the discovery of Coenzyme A and its place in intermediary metabolism. He is remembered for his discovery of Krebs Cycle (Tricarboxylic acid).

HIPPOCRATES of Cos (460-367 B.C.)
The father of medicine was the son of Heraclides a physician, and was born on the Greek Island of Cos. He founded a school of medicine, teaching his own sons & many others beneath a plane tree, his main contribution was the written recording of many accurate clinical descriptions. His main work, 'Aphorisms' contains many proverbial generalisations. His Hippocrates Oath is still accepted as standard of Physicians' ethical code.

Reference:
John A. Lourine, Medical Eponyms: Who was Coude ?. Published by Pitman Publishing Inc. Massachuetts