THE JAFFNA MEDICAL JOURNAL

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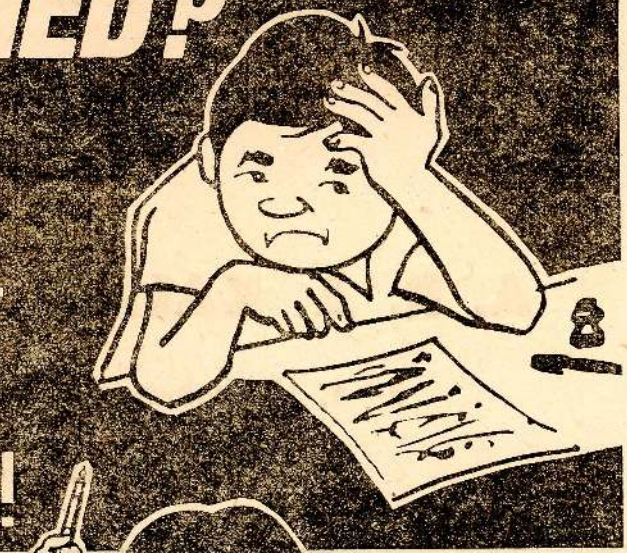

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THE JAFFNA MEDICAL JOURNAL

JOINT EDITORS
DR. R. NATKUNAM
DR. S. SUBRAMANIAM

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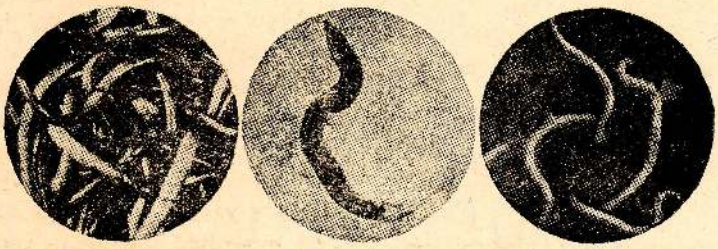

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Editorial . . . .

A Third Medical Faculty

A Campus of the University of Sri Lanka is being established in Jaffna. What concerns us in particular is the question whether this campus will include a Faculty of Medicine; in other words, does Sri Lanka need a third medical school? At present the medical faculties at Colombo and Peradeniya together produce about two hundred and fifty graduates per year. Our country is already far short of the ideal 1 : 1000–doctor : population ratio and with the unfortunate population growth that we are witnessing in our country today, this output is meagre.

The General Hospital at Jaffna could with a few but essential modifications be converted into a functional medical school. The problem, of course, is to find the necessary funds. It is deplorable that in Sri Lanka only a mere 10% of the total expenditure on education is set aside for the University. In this context it is of interest to note that India spends 17·2% and the USA 27%.

Our country is not short of suitable students; it would be a conservative estimate that some five hundred students qualify to enter the Medical Faculties each year but of these only half the number is in fact enrolled. This, apart from being a melancholy spectacle, is a waste of talent. Economic planners are traditionally reluctant to allocate funds for such items as education and health which admittedly have an enormous potential to absorb resources. But fortunately, times have changed and education and health are conceded to be major weapons in a strategy for development. The increased expenditure for the setting up of a third Medical Faculty in Jaffna is an investment that the country must make.

We understand that plans are being finalised to train students in the various provincial hospitals for a period of three years after which they, as Medical Assistants, will man the dispensaries and the smaller hospitals in our country. It is said that the fully trained medical graduate is reluctant to serve in the smaller hospitals while it is hoped that the partly trained assistant would gladly work in these institutions. What attracts a doctor, as indeed a patient, to a particular hospital is the facilities available in that institution. Improve these in at least the Provincial and the Base Hospitals, the now frustrated and impotent medical graduate will become a willing worker and an effective doctor. The smaller hospitals and dispensaries could well be managed by paramedical staff.

In 1870 there was established in Colombo an 'elementary medical school to impart practical instruction in Medicine, Surgery and Midwifery". Now, over a century later and after the lapse of twenty five years of independence it is to be regretted that we should still propose to set up what are in effect 'elementary medical schools' to train medical assistants. This is an insult and an affront to the youth of Sri Lanka.

NEUROPATHIC SYNDROMES OF UNCERTAIN AETIOLOGY IN CEYLON[1]

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Government Hospital, Gampaha.

THERE have been abundant reports from several countries in the tropics and subtropics of a group of neurological disorders where the main findings comprise, bilateral optic atrophy, bilateral nerve deafness and predominantly posterior column myelopathy with or without polyneuropathy (Scott, 1918; Splillane, 1947; Garland, 1946; Walters, 1953; Money, 1959; Haddock et al, 1962; Montgomery et al, 1964; Osuntokun, 1968). There is a variability in the manner of neurological involvement and details seem to differ from place to place. In Nigeria for instance, the ataxic non-spastic syndromes are common, whereas in Jamaica the spastic syndromes are more common (Monekosso, 1962). They are of unknown aetiology and form a heterogenous group probably with different pathologies.

We wish to report 5 cases of obscure neuropathies occurring in the Ceylonese.

Case 1.

(4973/65K). Male, aged 40 years was seen with unsteady gait of 13 years duration. Examination revealed no evidence of malnutrition or avitaminosis. Nervous system: Visual acuity was diminished, pupils were equal, central and reacted to light and accomodation and ocular fundi showed pallor of discs. He had bilateral nerve deafness and hoarseness of voice. There was incordination of the limbs, more marked in the lower. Romberg sign was positive. There was 'glove and stocking' type of anaesthesia with hyporeflexia in the upper limbs and absent reflexes in the lower limbs. The gait was grossly ataxic,

Investigations:

VDRL negative (blood and CSF), CSF: occasional cell, sugar 50 mgm%, proteins 20 mgm%, Non-Apelt test –ve, Lange normal.

Comment:

This patient had predominantly an ataxic syndrome with optic, auditory, laryngeal involvement and peripheral sensory neuropathy.

Case 2.

(15586/69G). Male, aged 45 years was admitted with progressive dimness of vission, numbness and weakness of limbs of one month duration. Examination of the nervous system revealed that he had nominal aphasia, grasp reflex and poor memory. Ocular fundi showed bilateral optic atrophy with diminished visual acuity. Hyporeflexia and 'glove and stocking' type of anaesthesia.

Investigations :

X'ray of skull : normal, Hb 10·6gms%, CSF, Occasional lymphocyte, proteins 30 mgm%, sugar 60mgm%, VDRL negative, Lange 1222110000.

Comment :

This patient exhibited mental disturbances together with optic nerve involvement and peripheral neuropathy.

1 Submitted for publication in October 1971.
* Present address: General Hospital, Colombo.

Case 3.

(42264/68K). Female, aged 28 years had weakness of her lower limbs of 12 years duration and burning sensation of her feet for several years from the onset of her illness. Examination revealed a well nourished female with no nutritional muco-cutaneous lesions. The cranial nerves showed no abnormality. There was marked incordination in the lower limbs. Romberg sign was positive. There was 'glove and stocking' type of anaesthesia. The reflexes were diminished and the gait was ataxic.

Investigations :

Hb 13·9 gms%, CSF occasional lymphocyte, proteins 20 mgm%, sugar 60mgm% Lange 1100000000. VDRL non-reactive in blood and CSF. Plasma proteins 7.1 gms%, A/G ratio 1·34.

Comment :

She had marked ataxia, sensory neuropathy and burning feet syndrome.

Case 4.

(15501/69G). Male, 40 years was admitted with blurring of vision and weakness of his legs of one month duration. Examination revealed no evidence of nutritional deficiencies. Visual acuity was 6/9, 6/12 and the discs were normal. There was wasting of the calf muscles and bilateral foot drop. Tactile sensibility was diminished distally. Postural sense was normal.

Investigations :

Hb. 14·0 gms%, fasting blood sugar 78 mgm%, CSF normal, VDRL negative.

Comment :

This patient had poor vision with motorsensory neuropathy and bilateral foot drop.

Case 5

(35441/70G). Female, 22 years was admitted with blurring of vission, pain in the lumbar region and heaviness of legs and difficulty in walking of a few days duration. She has had a similar illness 4 years previously from which she had recovered without any residual symptoms. Examination of the nervous system revealed wasting and weakness with diminished tone of muscles of both upper and lower limbs, absent knee jerks with extensor plantar response. Sensory deficit to touch in the lower limbs with diminished postural sense. The gait was ataxic. She had difficulty in passing urine.

Investigations :

X'ray of the lumbo-sacral spine : No abnormality was seen. CSF normal, VDRL negative.

Comment :

Many of the clinical features are reminiscent of disseminated sclerosis, visual and limb symptoms and bladder involvement.

Clinical profile

The patients presented a wide spectrum ranging from profound brain disturbances-nominal aphasia, grasp reflex and memory loss (Case 2) to selective cranial nerve involvement, pallor of the discs (Cases 1, 2 and 4) nerve deafness (Case 1), laryngeal involvement (Case 1) as part of a more widespread neuropathic process with spinal cord involvement giving rise to marked ataxia (Case 1, 2 and 5)to peripheral neuropathies (Cases 1, 2, 3 and 4). One (Case 5) showed features reminiscent of disseminated sclerosis. They were all fairly well nourished with no evidence of avitaminosis.

Discussion

Nutritional neurological syndromes have been described by several workers. Stannus (1936) described ataxia and optic neuritis with other features of pellagra in Nyassaland, Scott (1918), posterior column and optic neuritis in Jamaicans and Pallister (1940) ataxic paraplegia with dimness of vision in Malaya. Money (1958) gave an account of ataxic neuropathy in Nigeria and his patients had Vitamin B deficiencies. The ataxic syndromes found in Tanganyika and described by Haddock et al (1962) were characterised by the absence of muco-cutaneous lesions and they resembled some of the cases in this series.

The aetiology is obscure and in many tropical countries malnutrition and intoxication or both have been blamed. The proclivity a priori to associate deficient diet with these neurological syndromes must be scrutinized very carefully in the tropics and subtropics. Osuntokun (1968) has reviewed the relationship of the ataxic neuropathy to malnutrition. The patients in this series did not show any clear evidence of malnutrition. Rice is the staple diet and beriberi is rarely seen in this country.

While much attention has been given to deficiencies in the diet very little has been given to the composition as well as to additives in the diet. In Nigeria, the syndrome has been related to chronic exposure to dietary cyanide and this is found in the culinary derivatives of cassava, the tuber of manioc (Osuntkun, 1968). Certain other foods eaten in Nigeria such as beans, yams, maize and millet contain cyanogenetic glycosides (Sinclair and Jelliffe, 1961). Ataxic neuropathy occurs in the Senegalese (Collomb et al, 1966) and their diet contains millet rich in cyanogenetic alkaloids. Evidence for the suggestion that chronic cyanide intoxication contributes to the pathogenesis of these disorders have been admirably reviewed by Osuntokun (1968). The tuber of manioc (Manihot utilisima, cassava) is an item of food among local inhabitants, yams (maranta arundinacea, Colocasia esculenta, Ipomoea batatas, Dioscorea alata, Dioscorea bulbifera) and jak (Artocarpus integra) are also eaten.

Most of our patients were relatively young and the age of onset of the illness in three was below 20 years, so that whatever the causative factors, they should be acting in early life. Many take indigenous medicines containing herbs of various sorts, the neuro-toxic effects of some of these are not known. Indigenous spirits contain a high percentage of alcohol. They contain additives and are often adulterated with methyl alcohol or spirits of wine. Only one patient in this study gave a history of alcoholism.

Summary

Five patients with obscure neuropathy are described. They presented a varied spectrum in their clinical manifestations. The aetiology is not clear. There may be more than one aetiological factor. Malnutrition and intoxications are factors that have to be considered. Among the latter are dietetic constituents, herbal medicines, indigenous distilled spirits and additives.

Acknowledgements

We wish to thank the Superintendent of Health Services, Colombo for permission to publish this paper.

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HIGHLY SELECTIVE VAGOTOMY WITH MIDDLE GASTRECTOMY IN THE TREATMENT OF CHRONIC PEPTIC ULCERS

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Present Practices

THE concepts of and the operations practised for, chronic peptic ulcers of the stomach and duodenum, have been changing from time to time. It has varied from the radical operations of Billroth I and Billroth II gastrectomy to the highly selective vagotomy (H. S. V.). In the Billroth operations there is ablation of a large part of the stomach and alteration of the physiological pathway of food with its consequent complications, as dumping syndrome, diarrhoea, anaemia and nutritional deficiency and small stomach syndrome. In the H. S. V. there is minimal interferance with the anatomy and physiology of the gastro-intestinal tract, causing the vagal denervation of only that part of the stomach that secretes acid. The H. S. V. does not prevent the humoral response of the acid secreting parietal cell mass. The crucial importance of a high concentration of acid in the gastric juice in the aetiology of the causation and recurrence of duodenal ulcers is well known (Bank and others 1973) In the high acid secretors a H. S. V. alone may not prevent a recurrent duodenal ulcer.

The Billroth II operation practised for duodenal ulcers, definitely reduced the acid production of the stomach and 97% of them healed and did not recur. The mortality rate of this operation varied from 0·5%—3% In 10—15% of cases there were serious set-backs due to dumping syndrome, biliary reflux, anaemia, weight loss and small stomach syndrome. These were due to excessive resection of stomach and alteration of the physiological pathway of food. In the Billroth I operation practised for gastric ulcers, there were 4% of recurrent ulcers and 3% had dumping syndrome and other nutritional deficiencies.

Vagotomy, either truncal or selective, in combination with a drainage procedure, such as pyloroplasty or gastro-enterostomy had been practised for duodenal ulcers. In the case of gastric ulcers, an excision of the gastric ulcer was practised in addition to the vagotomy and drainage. These were less serious operations and the operative mortality was reduced to less than 0·5%. In the long term follow up, about 10—15% of patients developed recurrent or anastomotic ulcers. The incidence of dumping syndrome was relatively less after pyloroplasty rather than gastro-enterostomy. After truncal vagotomy, 20—30% of patients developed diarrhoea. The selective vagotomy, though it reduced the severity and incidence of diarrhoea, did not totally abolish it (Hendry and Abdulla, 1969).

In Sri Lanka, where the people eat bulky carbohydrate diet the preservation of an adequate capacity of the stomach is important. Tovey (1969) found that in the Indian patient a vagotomy and drainage procedure was superior to gastrectomy with regard to weight changes, capacity for food, and nutritional state.

Johnston and Wilkinson (1970) found that when they did a H. S. V., thus causing a vagal denervation of the acid producing part of stomach but leaving the vagal supply of the pyloric antrum intact, the motility of the antrum was preserved. Thus no drainage procedure was required. The normal physiological pathway was kept intact. No interferance was caused to the antrum, pylorus and duodenum and normal gastric emptying was preserved. The capacity of the stomach was kept intact. They claim an almost total absence of dumping syndrome and diarrhoea after their operation. A long follow up of 10—15 yrs is necessary to get a true picture of the incidence of recurrent ulceration. And this is still not available for H. S. V. The disadvantage of selective vagotomy and highly selective vagotomy is that small vagal branches lying close to the oesophagus and supplying the fundus of stomach is missed in 20% of cases even in experienced hands (Goligher and others 1968), (Imperati and others 1972). The electrical stimulation test (Burge and Frohn 1969) during the operation to ensure a complete vagotomy is cumbersome and unsuitable for routine surgical work. The pyloric regulation of the emptying of stomach is lost in drainage procedure (McKelvy, 1970). This uncontrolled emptying could cause a rapid emptying of fluid diet and rapid passage through the intestines resulting in loose motions.

Problems due to Present Practices

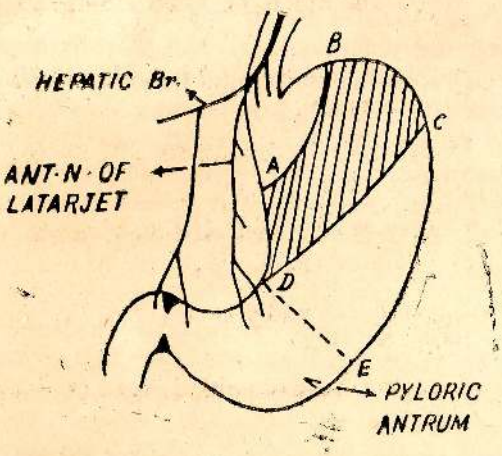
From the above account, it is clear that the ideal operation for peptic ulcers has not been discovered. The snags are caused by the variations of maximal acid output (M. A. O.) from patient to patient. The high acid secretors tend to get recurrent ulcers, after vagotomy and drainage procedure (Bank and others 1973). In these cases the parietal cell mass secreting acid, is so large that a mere elimination of the nervous factor alone is not sufficient to reduce the acid output sufficiently, to prevent the recurrence. I feel that in these cases a partial excision of the parietal cell mass, in addition to vagotomy is essential to reduce the acid output and prevent recurrent ulceration. The capacity of the remaining stomach after operation would still be sufficiently large to hold a bulky meal.

The antrum, pylorus and duodenum with their vagal nerve supply has to be preserved to maintain the normal physiological emptying of stomach contents. The food stream must pass in the normal way so that the acid in the antrum would inhibit the release of gastrin and act as a breaking mechanism in gastric acid secretion by the parietal cell mass (Johnston and Duthie 1965). The presence of the antrum with its mucus secretion would further act as a protective mechanism against recurrent ulcer.

H. S. V. with middle gastrectomy

The author set out to devise an operation that would take into account all the above factors. First a H. S. V. was done as described by Johnston and Wilkinson (1970). The lesser curve of the stomach is freed from the lesser omentum after dividing the branches of the nerves of Latarjet and branches of the left gastric vessels to the body of the stomach. Care is taken to preserve the two terminal branches of the nerves of Latarjet to the pyloric antrum (Johnston and Wilkinson 1970). The greater curvature is freed after dividing the short gastric branches. The stomach is transected along AB which is about 2" from the oesophago-gastric

junction. (Fig. 1). Another transection



CD is made so that (D) is just proximal to the pyloric antrum and includes any gastric ulcer which is removed in the resected part. The area ABCD, equal to $\frac{1}{3}$ the size of the stomach, is removed. The oesophageal end of the gastric cuff is anastomosed to the remaining body of stomach as shown in Fig. 2. The above

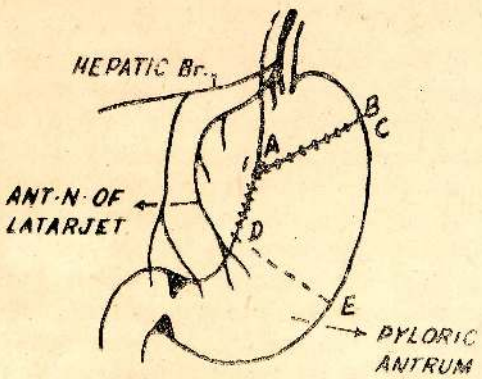


Fig. 2 After H. S. V. and Middle Gastrectomy

operation has been named H. S. V. with middle gastrectomy. The transection at AB and freeing of the lesser curve along AD effectively denervates the acid secreting part of stomach below AB. The removal of the area ABCD further reduces the parietal cell mass, so that even in the high acid secretors the acid output would be lowered and prevent recurrent ulcers. The remaining acid producing area CDE is fully vagally denervated and is thus less sensitive to gastrin stimulation(Uvnas 1942) The part of stomach proximal to AB secretes mucin and very little acid. The capacity of the reconstructed stomach is reduced by only $\frac{1}{3}$ so that, there is enough room to receive a bulky meal. The antrum, pylorus and duodenum with their intact nerve supply would have normal peristals and prevent gastric stasis. The passage of food mixed with a little acid through the antrum to duodenum would reflexly inhibit the release of gastrin.

Case Reports

Case 1

Ceylon Tamil female, 48 yrs admitted with peptic ulcer symptoms, of 12 yrs duration. At laparotomy on 28-12-1973 a chronic gastric ulcer was found on the posterior wall of the middle of the lesser curve. A middle gastrectomy including the ulcer, with a H. S. V. was done. Patient made an uneventful recovery. Histology of the ulcer showed chronic inflammation with no evidence of malignancy. Patient followed up so far is free from pain and able to enjoy normal meals without epigastric distension or vomiting.

Case II

Male Sinhalese patient, 47 yrs. was referred to our unit from the surgical professorial unit of Colombo. He had been investigated there and Ba Meal screening showed a chronic duodenal ulcer. He had ulcer symptoms for 18 yrs. As he was a resident of Jaffna and not keen on surgery,

he was referred to us for medical treatment. Patient developed severe ulcer pain on the medical regime and gave consent for operation. Operation performed on 1-3-74 revealed a chronic duodenal ulcer with no stenosis. A H. S. V. with middle gastrectomy was performed. Patient made an uneventful recovery. He is now completely free of ulcer pain and is able to enjoy his meals. He is very satisfied with the results of surgery.

The insulin test 6 months after operation would show whether the vagal denervation to the parietal cell mass is 100% complete. An investigation on weight changes, Hb % and Ba Meal screening 6 months after operation and at subsequent intervals would show any anaemia, nutritional defect or gastric stasis. A follow up of these patients for 10 - 15 yrs is essential to assess the recurrent ulcer rate Only a long follow up would show whether a H. S. V, wtth middle gastrectomy would turn out to be the ideal operation for peptic ulcers of stomach and duodenum.

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ADVANCED ABDOMINAL PREGNANCY

By

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Advanced abdominal pregnancy presents a fascinating problem, and is of special importance in countries where Western surgical treatment is not easily available or is avoided due to the ready availability of herbalists and ayurvedic Physicians who claim to cure all kinds of illnesses without resort to surgery.

A number of cases of advanced abdominal pregnancies have been published in the past. However there appear to be no cases of advanced abdominal pregnancy resulting in the delivery of a normal healthy living baby reported in Ceylon so far.

Case Report

Mrs. A. K. aged 36 from Atchuvelly came to the clinic for a routine antenatal check up on the 5th of February 1972. She was a 4th gravida with 3 previous normal deliveries. Her L. R. M. P. was June 15th, 1971. (She was in her 34th week of gestation) She gave a histroy of abdominal gripe and bleeding per vaginum on and off in August and early September 1971, which was treated by a local Ayurvedic Physician with herbal medicine. (This information was obtained only after closer questioning later on) Otherwise her pregnancy this time so far had been quite uneventful as far as the patient was concerned.

On physical examination of the patient the foetus was found to be very superficial as if under the skin. The foetal head was bulging out just below the level of the umbilicus high up from the pelvic inlet. (The feel of the foetus to the palpating hand was as if one were dealing with a complete rupture of the uterus where the foetus had been extruded into the abdominal cavity) However the foetal heart sounds were well heard and quite normal in rate and rhythm.

The patient felt quite well and at ease and could not understand our anxiety about her.

An X'Ray of the abdomen was ordered and the patient was asked to come back the next day.

However the patient came back only on the 20th of March for a second visit to the clinic. This time the X'Rays were available for study.

A vaginal examination was done at this visit where a thick long cervix displaced anteriorly was detected, a firm mass identified as the uterus could be palpated separately from the gestation sac. No foetal part could be ballotted or felt by the finger in the vagina. Considering all the available evidence a diagnosis of advanced extrauterine pregnancy was made and the patient was admitted for Laporotomy.

At operation the gestation sac was found to be adherent to the anterior parietal peritoneum, so that the anterior parietal peritoneum and the amniotic cavity were opened at the same time. The foetus was delivered without difficulty. The adhesions of the gestation sac to the parietal peritoneum

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were easily seperated and the sac was inspected.

The sac appeared to arise from the lateral part of the right tube (probably through the ruptured part). In most of its part the gestation sac was free from adhesions to the adjoining viscera. The right ovary was however firmly adherent to the lower lateral aspect of the sac; though it was clearly distinguishable as the ovary. The placenta was attached to what probably was the ruptured part of the right tube (probably the ampullary portion) and the adjoining portion of the broad ligament. The main blood supply to the placenta was through the infundibulopelvic ligament, where the right ovarian artery, had enlarged and was found to be as thick as an average persons thumb.

This enlarged right ovarian artery in the right infundibulopelvic ligament was doubly ligatured before attempting the removal of the placenta. In spite of this precaution there was very brisk bleeding from the placental bed before the haemorrhage could be brought under control. 2 bottles of blood were rapidly transfused under pressure to avoid any calamity on the table.

The gestation sac was completely removed including the right ovary and the abdomen was closed with a drain to the site of the placental bed.

A further pint of blood was transfused on the following day as the patient was still anaemic.

Postoperative recovery was surprisingly smooth. The baby which was also surprisingly free of any deformity weighed 7 lbs 12 ozs at birth.

Both mother and baby were discharged in good condition on the 8th of April.

Incidence

It has been estimated (Chassar Moir 1956) that 25% of extra uterine pregnancies diagnosed after the 20th week of gestation will result in viable babies and about 50% of these may survive the first week after delivery and of these 33% will have some serious deformity.

Pathology

Novak (1958) believes that the earlier idea that the fertilised ovum expelled through the tubal rupture might occasionally retain its vitality and reimplant itself on the peritoneum or on some adjoining viscus resulting in a secondary abdominal pregnancy is incredible. The embryo is most certainly likely to succumb the moment its seperation from the tubal wall is complete. The correct explanation of these cases is that the placenta which is attached to the tubal wall is not disturbed at the time of tubal rupture even though embryo has been extruded through the rupture and continues to grow outside in its own gestation sac. The chorionic villi may however subsequently grow outward through the rupture point, so that more and more of the placental area, and eventually the entire placenta may be founded outside the tube.

In the majority of cases however the decidual reaction in all these ectopic sites is very poor so that retroplacental and intra abdominal haemorrhage is likely at any time. The foetus usually dies and under goes maceration or mummification.

In exceptional cases the foetus continues to grow to full term. Even in these cases the incidence of foetal deformites is high due

to associated oligo hydramnios and amniotic bands constricting the foetal limbs and trunk.

Diagnosis

Very often a history of some upset in the early months of pregnancy — such as bleeding or abdominal pain which may have been mistaken for a threatened abortion — is available.

In the latter months digestive disturbances, extreme constipation etc., may be complained of. Surprisingly in quite a few cases the symptoms may be so mild and vague that it is passed off as the normal discomforts of pregnancy.

Though in the particular case reported above, physical examination revealed the foetal parts to be very superficial and led one to suspect an abnormality yet Jeffcoate (1962) mentions that generally speaking, contrary to what may be expected in these cases the foetus is not very easy to feel. The uterus may be felt as a separate mass and may be mistaken for a cyst or a fibroid. However the pregnancy mass will not be found to exhibit the rhythmic Brexton Hicks contractions while the separate uterine mass may show these contractions.

The cervix is never effaced and is usually displaced anteriorly and upwards.

X'Ray Findings

(a) An abnormally high position of the foetus above the pelvic brim, usually associated with malpresentation.

(b) Distortion of the foetus either in extreme flexion or extension, specially if the same abnormal attitude of the foetus is seen in X'Rays taken at different times.

(c) Absence of uterine shadow surrounding the foetus.

(d) Other features such as the non-pregnant uterus casting a separate shadow, or gas seen in the maternal ileum abnormally near the foetal head, or intestinal shadows seen intermingling with the foetal parts are all suggestive of the condition.

(e) Hysterogram may be considered only when the diagnosis is almost certain and as such is not of much practical value.

Management

Once the diagnosis is confirmed it is not advisable to delay surgery. If it is decided to delay it for sometime for the sake of obtaining a mature baby in a relatively infertile woman, it is only permissible if the patient is admitted to a hospital where immediate operative facilities are available if the need arises.

The chief problem at operation is the management of the placenta and the sac. The ideal treatment is to remove the foetus, the placenta and the sac in entirety.

If the foetus is dead the operation is relatively easy as the haemorrhage is not too heavy and is easily controlled.

In the living placental haemorrhage is a big problem and therefore adequate blood must be reserved before embarking on the operation. Serious damage may occur to loops of bowel if the placenta is attached to bowel or to a mesentery.

If the placental site is such that it cannot be easily removed without causing serious damage and bleeding, it is better to cut the cord short and leave the placenta

untouched. The pleacenta will in due course be autolysed and removed by the system over a period of months or years as the case may be.

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THE PLACE FOR REMOVAL OF THE TONSILS AND ADENOIDS

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THE role of faucial tonsils and adeniods has been ill-understood. As a result, the indications for surgical removal of these structures have been controversial, leading to a certain amount of debate and lack of agreement. The faucial tonsils and adenoids form part of the lymphoid collections referred to as WALDEYER'S RING which is disposed around the portal of entry of ingested food and inhaled air, and situated in the throat. This arrangement had been interpreted as indicating a protective function to the tissues that formed this so called Waldeyer's ring, and it's importance had probably been over-exaggerated. The view that the tonsils and adenoids therefore played an important protective function in the defence against invasion by micro-organisms from the throat has been frequently responsible for failure to seek timely surgery even in the presence of good indications for surgery. Appreciation of the role of the tonsils and adenoids therefore precede proper understanding of the basis for recommending their removal.

Faucial tonsils and adenoids are situated sub-mucosally. Like all other lymphoid collections situated in the sub-mucosal layer of the alimentary tract, (such as the Peyer's patches in the small intestine), the tonsils and adenoids are devoid of afferent lymphatics. Hence, tonsils and adenoids do not form part of the lymphatic drainage path of any other structure in the neighbourhood. Any infection of the tonsils or adenoids is therefore presumed to enter from the surface of these structures. The tonsils and adenoids usually become smaller and begin to atrophy during adolescence, and this change becomes more marked with increasing age. Hence, problems arising in the tonsils and adenoids mainly affect children.

Contractions of the superior contrictor muscles of the pharynx during swallowing displace the tonsils medially and thereby cause the tonsils to come into contact with the substance swallowed. During this process, viruses and small bacterial particles may get trapped in the crevices on the mucosal surface, enter the lymphoid tissues through minute abrasions, and produce injury or provoke reaction or response within these structures. Thus, such entry may lead to formation of antibodies within these lymphoid masses, and antibodies have been detected in the efferent lymphatics draining these masses. Such immunity derived from antibodies from the tonsils and adenoids cannot be of any great significance, because removal of the tonsils and adenoids has never been known to increase the liability to infections. On the contrary, throat infections become less frequent after adenotonsillectomy.

Tonsils and adenoids do not filter the food taken in or the air inhaled. Of the large volumes of ingested food and inhaled air, only a very small fraction comes into contact with these surfaces of these lymphoid tissues. Of the millions of pathogenic bacteria present in food or air that comes

into contact with these structures, a few setttle down and inhabit the surface and the tonsillar crypts. Thus, the bacterial flora of the throat of an individual may change from time to time. These bacteria may produce inflammatory changes, particularly in the tonsils. Those who suffer repeated attacks of such inflammations find complete relief when the tonsils are removed. Hence the tonsils and adenoids have ceased to be considered protective 'filtering masses' situated at strategic points of entry of food and air.

Like all other lymphoid tissue, the tonsils and adenoids play a part in the formation and destruction of lymphocytes. Removal of the tonsils and adenoids is not known to confer any disability as far as this function is concerned, because the tonsils and adenoids form only a small part of the total mass of lymphoid tissue in the body.

Tonsils and adenoids may hypertrophy in certain allergic conditions. Such patients frequently have irritation and discomfort of the throat and chronic cough. Removal of tonsils and adenoids in such allergic states will not relieve these symptoms, as other lymphoid tissues in the nasopharynx will also undergo hypertrophy later, when that individual is exposed to the same allergen. Treatment in allergic conditions producing tonsillar enlargement and symptoms should therefore be directed towards avoiding contact with the allergen, desensitisation if possible, and administreing antihistamines.

Hypertrophy of the adenoids may cause obstruction to the orifices of the Eustachian tubes, and interfere with the proper functioning of the Eustachian tubes. This frequently leads to attacks of acute otitis media, or of secretory otitis media; this latter condition is also referred to as 'glue ears'.

Indications for Surgical Removal of the Tonsils and Adenoids

1. Recurrent Attacks of Tonsillitis :

Arbitrarily, four or more attacks of tonsillitis in a year, each of which confines the individual to the home for several days, resulting in considerable loss of attendance at school or place of work, is generally accepted as a strong indication for surgery. The number of days the patient is disabled by the illness is of greater importance than the frequency of the attacks, when deciding on the need for surgery. Adenoids may also be removed at the same time. Remarkable improvement in the health and physical state of the patient follows removal of tonsils for this indication.

2. After Peritonsillitis or Peritonsillar Abscess :

These patients are prone to frequent recurrences of these inflammations. Such recurrences invariably lead to formation of adhesions between the tonsils and lateral pharyngeal walls; these adhesions make subsequent dissection very difficult. In these conditions, administration of antibiotics and evacuation of any localised collection of pus are essential in the initial acute stages. Tonsillectomy is thereafter recommended six to eight weeks after the acute episode, by which time the patient usually becomes symptom-free. In peritonsillar abscess (or quinsy), some surgeons advocate 'quinsy tonsillectomy', ie. where drainage of the abscess and removal of the tonsils are undertaken at the same time during the initial acute stage. Bleeding during 'quinsytonsillectomy' is neither troublesome nor appreciable, an observation which is in

conflict with common belief. The main argument against 'quinsy tonsillectomy' is that pus from the inflamed focus is more likely to be aspirated into the respiratory passages, when the patient is recovering from the general anaesthetic which is required for 'quinsy tonsillectomy'. On the other hand, mere evacuation of the pus can be achieved in quinsy in a conscious patient comfortably seated and able to spit out all the pus.

3. Recurrent attacks of Acute Otitis Media or Secretory Otitis Media.

Hypertrophied adenoids which obstruct the Eustachian orifices and thereby lead to changes which result either in acute otitis media or in secretory otitis media require removal of the adenoids, if simpler measures such as a prolonged course of antihistamines, antibiotics, or myringotomy and aspiration of fluid from the middle ear fail to produce a cure. The tonsils may be removed at the same time. About half the number of patients get well without surgery.

4. Large Tonsils Which Cause Difficulty in Swallowing :

Such tonsils are best removed. Antihistamines both before and after tonsillectomy affords further benefit to these patients when the tonsiller enlargement is due to allergy.

5. Hypertrophied Adenoids Causing Severe Obstruction to Nasal Airway :

This problem is met with mainly in children. The removal of the adenoids produces return of patency of the nasal airway and relief of symptoms.

6. Tonsils when associated with Retention Cyst, Keratosis Pharyngis, or Tonsillolith.

These changes may cause increase in tonsillar size with discomfort, or be recognised by the patients as something abnormal. Most patients get alarmed that these may become malignant, and keep consulting different surgeons, as reassurance invariably fails to subdue their fears. Tonsillectomy helps these patients.

7. As Prophylaxis Against Recurrent Rheumatic Fever.

After an attack of rheumatic fever, if throat swabs repeatedly grow Streptococcus haemolyticus, in spite of adequate antibiotic therapy, the patients are invariably referred by paediatricians and physicians for tonsillectomy, because they interpret it as being due to the persistence of a focus of streptococcal infection in the tonsils. Tonsillectomy will eradicate such a focus of infection when chemotherapy fails. This is a rare indication for tonsillectomy.

8. Prominent and Incurved Styloid Process Causing Symptoms.

Such patients present with pain over the distribution of the glossopharyngeal nerve. Removal of the styloid processes abolishes this pain. The styloid processes are easily reached through the tonsillar beds; removal of the tonsils as an immediate preliminary step in the exposure of the styloid processes, therefore becomes necessary. This is an indication for removal of normal tonsils.

9. Malignancy Confined to the Tonsils

Patients rarely present at the stage when malignancy is confined to the tonsils. Tonsillectomy permits removal of this malignant lesion and provides tissue for histological study. The pathology is usually some variety of malignant lymphoma or a squamous cell carcinoma arising from the

epithelial lining of the tonsils. Once malignant infiltration of adjacent tissues has occurred, tonsillectomy has no useful place in the treatment

Risks Associated With Adeno-Tonsillectomy

(i) Primary haemorrhage.

Primary haemorrhage becomes a cause of major concern in patients with bleeding disorders. In bleeding diseases, even very simple surgical procedures carry high risks, because primary haemorrhage becomes prolonged, heavy and difficult to control. The danger is far greater when operations like adeno-tonsillectomy are concerned, as the field of operation is at the upper end of the respiratory passages. If removal of tonsils or adenoids becomes very desirable in patients with deficiency of a clotting factor that deficient factor or fresh blood should be given before and after surgery, and should also be available in reserve, in case further administration becomes necessary.

When bleeding time is prolonged, pressure on the beds of the tonsils and adenoids for a long time may bring about haemostasis. Bleeding points in the tonsillar bed should be identified and ligated with meticulous care.

(ii) Reactionary haemorrhage

Appreciable reactionary bleeding is a rare complication. This will necessitate re-anaesthetisation to permit measures to arrest bleeding. The source of bleeding from the tonsillar bed may be secured and ligated, or controlled by compression with a piece of gauze, rolled up and placed in the tonsillar bed, and held in position by approximating with sutures, the anterior and posterior pillars of fauces, over the gauze so placed in the tonsillar bed. Reactionary bleeding from the adenoidal bed may be from remnants of adenoidal tissue left behind. Such remnants, if present, should be removed. Persistence of bleeding may be controlled by insertion of an effective post-nasal pack. Blood transfusion may also be needed. If all the above measures fail, ligation of the external carotid artery may be considered.

The incidence of reactionary haemorrhage can be minimised by careful attention to haemostasis during the time of surgery. Since re-anaesthetising a patient with reactionary haemorrhage after adeno-tonsillectomy carries dangers and difficulties which are not encountered during the initial anaesthesia for adeno-tonsillectomy, the importance of time spent in careful attention to the arrest of bleeding during the operation can never be over-emphasised.

(iii) Secondary haemorrhage.

Secondary haemorrhage may occur after the patient leaves hospital causing the patient to return to hospital. The bleeding invariably ceases by the time he is seen. Therapeutic measures required include sedation with a small dose of morphine or pethidine, administration of antibiotics, blood transfusion when indicated, and on rare occasions the compression of the tonsillar bed with gauze as described earlier.

(iv) Epidemics of poliomyelitis.

Adeno-tonsillectomy during an epidemic of poliomyelitis is believed to expose the patient to a risk of developing bulbar polio, the virus entering through severed nerve fibres in the tonsillar or adenoidal bed. This appears to be a sound reason for avoiding removal of tonsils and adenoids during an epidemic of poliomyelitis.

TREATMENT OF TETANUS WITH TOTAL MUSCLE RELAXATION

By

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TETANUS is common in Jaffna. In the treatment of tetanus control of rigidity and reflex spasms is important. Conventionally barbiturates, chlorpromazine, mephenesin and diazepam are used in combination or alone to suit individual patients. However in severe cases spasms are not controlled. Such cases are best admitted to a specialised unit with facilities for assisted ventilation and treated with total muscle relaxation & intermittent positive pressure ventilation.

Curare & similar muscle relaxants will completely abolish reflex spasms of the severest case of tetanus but willalso paralyse the muscles of ventilation. It is therefore necessary in addition to artificially ventilate these patients. Four patients were treated in our unit in the last two years & the details of one case is described to illustrate, the management of such a patient.

Patient AB a 39 yr. old male was admitted to hospital on 8-12-73 with trismus & an infected wound of the left big toe of 2 days duration. In spite of conventional therapy, he developed neck stiffness & abdominal rigidity on 10-12-73. Spasms developed on 11-12-73. Initially the spasms were controlled with chlorpromazine 50 mg. in 6 hrly, syrup mephenesin 250 mg. ½ hourly, diazepam 10 mg. 6 hrly and phenobarbitone gr. ½ 6 hrly but later the spasms became continuous.

At this stage, a decision was made to treat the patient with muscle relaxants and intermittent positive pressure ventilation. He was transferred to the Thoracic unit on 13-12-73. 30mg. of tubarine were given IV, patient intubated and put on the ventilator.

A regime of tubarine 15 mg IV 3 hourly, diazepam 10 mg IV 3 hrly and pethidine 50 mg IV 3 hrly was started, so that the patient had one of the above three drugs every hour for the first 6 hours. However he continued to get mild spasms and was given tubarine 15 mg IV every hour, diazepam 10 mg IV 2 hrly and pethidine 50 mg IV whenever necessary. The spasms were controlled on the above regime. A tracheostomy was performed on 15-12-73 and the ventilation continued. The spasms recurred in mild form at less frequent intervals. Pethidine was omitted on 15-12-73 and chlorpromazine 50mg 6 hrly was given instead. Tubarine was given 2 hrly on 16-12-73 and was altogether omitted on 17-12-73 as the spasms disappeared. The other drugs were gradually taken off as the patient's condition improved. The patient was gradually weaned off the ventilator from 16-12-73 and was completely taken off it on 20-12-73.

During the period on the ventilator, the patient was under constant visual observation and nursing care for the 24 hrs of the day. Aseptic technique including the use of sterile gloves and masks during tracheostomy care was scrupulously observed. The patient was fed through a nasogastric tube and given about 3000

calories per day. His fluid intake and urine output were charted daily. Aspiration of bronchial secretions was carried out at 30—60 minute intervals for 5—10 seconds. The tracheostomy tube was changed every 24—48 hrs and the bronchial secretions were sent for culture and antibiotic sensitivity every other day. He was on antibiotic cover with Ampicillin but on 18-12-74 he developed a staphylococcal pneumonia sensitive to cloxacillin and was treated accordingly.

The patient made good progress from then on. He was actively immunised against tetanus and discharged from hospital on 7-1-74.

Three other patients with tetanus were treated in our unit.

SK 46 yr old female treated in a general surgical ward for a week, was transferred to our unit on 2-2-72 with laryngeal spasm. She was given tubarine IV and managed on a ventilator from 2-2-72 to 12-2-72. She recovered fully. KP 6 yr old child was transferred to our unit with severe spasms after admission to a general surgical ward. He was given muscle relaxants, intubated & put on the ventilator. As endotracheal tubes of correct sizes were not available, a smaller sized tube was used. About 4 hours after admission to our unit, the tube slipped out and the patient developed an anoxic cardiac arrest. He could not be revived. SK 60 yr old patient was admitted to a general surgical ward on 30-3-74 and transferred to the thoracic unit on 1-4-74 with severe spasms. He was on the ventilator from 1-4-74 till 8-4-74 when the ventilator suddenly stopped functioning and could not be repaired. The patient expired the same day.

Discussion

Intermittent positive pressure ventilation and muscle relaxants were first used by Smythe et al in 1958 in an attempt to reduce the mortality from tetanus neonatorum, which was then over 90%. Between 1967 and 1972 with this regime the mortality was reduced to 21%. The same author in a more recent review (1974) of a consecutive series of 97 cases had only 10% mortality.

In tetanus, the objective is to paralyse the patient with muscle relaxants and provide artificial respiration and enough sedation to impair awareness and memory. Treatment by paralysis need only be considered in cases of laryngospasm, respiratory failure, severe chest infection and severe spasms.

Patients treated on the ventilator are best managed in a special unit by an experienced staff. A constant 24 hr, visual observation of the patient, while on the respirator is the cornerstone of management, for the following reasons:—

1. Mechanical mishaps in a seriously ill patient can prove fatal within a few minutes. Equipment to manually ventilate the patient such as an Ambu bag with appropriate connections to the tracheostomy tube should be kept at the bed side. The ventilator used in our unit, the East Radcliffe positive-negative respirator has a built in mechanism for manual operation in the event of such mishaps.

Mechanical ventilation for more than 12—24 hrs is usually performed through a conventional tracheostomy for two reasons:-

a) Prolonged use of a endotracheal tube may cause pressure necrosis of the vocal cords.

b) a tracheostomy opening facilitates the maintenance of a clear airway by suctioning.

2. Bedside nursing for adequate removal of secretions helps in the maintenance of a clear airway which is an important factor in obtaining good results. Strict sterile precautions are taken during suctioning and catheters used are rinsed with sterile water. Direct instillation of saline, 2–5 ml at periodic intervals into the tracheobronchial tree will prevent inspissation of secretions. Saliva which accumulates in quantity in the throat of a curarised patient is sucked out often. Aspiration of bronchial secretions is done whenever necessary with the ventilator stopped for a few seconds.

3. Infection is the other great hazard in these patients. The tracheostomy tube is changed every 24–48 hrs preventing retention of secretions in dependant portions. Systemic antibiotics are given although the risk of resistant strains causing infection was present. Bacteriological identification and drug sensitivity of the infecting organism should be done frequently and if indicated the antibiotic changed. Two of our patients developed pneumonia. In the first patient a staphylococcal infection sensitive to Cloxacillin and in the second a pseudomonas infection sensitive to Colistin were treated accordingly.

4. Patients should be turned from supine to semilateral position hourly to avoid pooling of secretions in dependant parts.

5. Ideally, facilities for blood gas analysis should be easily accessible to confirm adequacy of ventilation. This however was not available to us and the assessment was made on the general condition of the patient, pulse, blood pressure and urine output.

6. These patients are fed through a nasogastric tube and may require large amount of fluid to off set excessive sweating. A high calorie diet of about 3000cal/day is necessary.

The single most important factor towards success in treatment is constant care and attention by the doctors and nursing staff. Care, attention and dedication are largely responsible for good results.

Summary

Four cases of severe tetanus are presented. Their ages varied from 6 yrs. to 60 yrs. Three of them had severe spasms and one patient had laryngospasm.

All cases were first treated in a general surgical ward and then transferred to the Thoracic Unit. Management of severe tetanus with muscle relaxants and assisted ventilation is described.

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DISTURBANCES AT PUBERTY AND THEIR MANAGEMENT

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PUBERTY is a growth phase characterised by physical sexual differentiation and by the onset of activity of sex organs. Hence, by definition, it is a period in time and not an episode like menarche. Puberty is the first part of adolescence, the remainder being concerned with mental and emotional adaptation to sex function and with gradual development to full maturity.

Definite signs of puberty are usually present by the age of 9 or 10 years when the breasts develop an areolar bud and soon afterwards they become generally enlarged. By this time hair appears on the mons veneris. The body contours change by the deposition of fat. The development of breasts and pubic hair usually precedes menarche. Therefore the practice in Jaffna of 'forced feeding' of fats and proteins (gingelly oil, gingelly cakes, fried brinjal and eggs) after the onset of menarche, is like adding manure to plants for the first time after the plants have started to bloom and seed. No 'high pressure' feeding is necessary at the time of menarche and immediately after. What is neeessary is good balanced diet throughout childhood. This type of over-zealous feeding at menarche can create psychological problems in the girl making her 'menses orientated'. Menarche should be treated by parents as something normal.

Disturbances that could occur at puberty are:

1. **Precocious Puberty.** This is defined as the onset of sexual maturation before the age of eight years. True precocious puberty is due to early activation of the ovaries by the premature onset of increased anterior pituitary function. Physical development is also precocious in some cases. Epiphyseal closure can occur early so that the individual may ultimately be short in stature. Mental development does not progress pari passu. Hence these children should be protected against sexual assaults. About 90% have no pathological features. This group is termed constitutional precocious puberty. Adrenal tumours, ovarian tumours and tumours in the hypothalamico-anterior pituitary system may also lead to precocious sexual development: pseudo —precocious puberty. Children presenting with vaginal bleeding before the age of ten years should be examined for evidences of secondary sex characters. If these are not present the bleeding is probably not menstrual and a local cause should be looked for. Neuroses tend to develop as a result of disparity between mental and physical age.

The administration of oestrogens or chorionic gonadotrophins over longer periods causes the very somatic and genital tract changes which are associated with precocious puberty. This fact can be turned to advantage in patients with delayed puberty. Precocious puberty of constitutional type, if diagnosed early, can be corrected

with Primolut—N 5 mg daily for six months or longer.

2. **Delayed Puberty.** When secondary sex characters do not develop and when menstruation does not begin before 16 years of age, the condition is termed delayed puberty. Such patients fall into fairly clearly defined groups each with different symptoms and signs, with different prognoses and requiring different treatment.

a) Patients with concealed menstruation—cryptomenorrhoea. Here the fault is an obstruction at the level of the cervix or below preventing the escape of menses. Here the treatment is simple, but if undiagnosed early, disastrous results ensue. Any young woman who has not started to menstruate two years after the development of secondary sex characters or who has periodic lower abdominal pain must be examined to exclude any obstruction. Some of these patients may present with difficulty in micturition or retention of urine.

b) Patients who do not menstruate at the time expected and who may or may not show other signs of abnormal development of physique eg. Turner's Syndrome.

c) Another group who are often attractive females but born without a uterus or vagina and having normal external genitalia. This condition is termed Testicular Feminisation syndrome. Most of these patients have bilateral inguinal hernias with or without an ectopic testis and this is the usual way in which they are detected in childhood. They have scanty bodily hair. It is usually recommended that the testes be removed as malignant changes occur so frequently. Removal of the testes is performed after puberty to enable breast development. Following the removal of the testes slight menopausal symptoms follow.

d) **True Agonadism or Overzier's syndrome.**

The appearances of the patient are similar to the above but these patients have the usual bodily hair. No gonads can be found. For the last two groups construction of a vagina is often required but this should be done only when they wish to get married.

c) Other causes of delayed puberty are hypothyroidism, anterior pituitary deficiency and adrenal insufficiency.

3. **Pubertal Obesity**

This tendency to obesity at puberty often disappears after the onset of sexual maturity. In others obesity remains a dominant characteristic. In many instances juvenile obesity is due to over eating. Here dieting and psychotherapy are indicated.

4. **Menstrual irregularities.**

a) **Abnormal menstrual rhythm**

Treatment is indicated only in cases where menstruation occurs too frequently or too infrequently (polymenorrhoea or oligomenorrhoea). These disturbances often indicate anovulatory bleeding due to partially developed ovarian

function. Under normal circumstances these are of limited duration during puberty. Usually there is parental anxiety; also the girl may become anaemic. Oestrogen progestogen combinations are beneficial. If the girl has not attained an appreciable height for her age then only progestogen in the form Primolut–N 5 mg. daily from the 18th to the 26th day of the cycle is adequate and may be repeated again during the next cycle.

b) Menorrhagia

In the young, heavy bleeding is usually also prolonged. It is due to incompletely developed corpus luteum with deficient progesterone secretion. In addition, according to American workers in this field, immature uterine muscle lacks contractility and this makes an extra reason for heavy blood loss. Rarely this type of bleeding is due to extragenital defects eg. abnormal coagulation mechanism. Primolut–N 5 mg. twice daily for sixteen to eighteen days from the tenth day of the cycle corrects the abnormal bleeding. This could be repeated over a few more cycles using smaller doses.

In the past, on the subject of curettage for these young patients there was difference of opinion; some believing that this procedure was unnecessary while others strongly advocated it. Sutherland advised curettage, for this examination might reveal unsuspected endometerial tuberculosis. Sometimes the curettage itself was curative. But after the introduction of synthetic progestogens this operation has become totally unnecessary in these young patients. Furthermore, this pubertal haemorrhage is mostly seen in spoilt, often, only children with over-anxious parents. Occasionally this pubertal bleeding may take the form of Metropathia haemorrhagica, but is more often threshold bleeding.

5) Gigantism

Apart from pathological growth due to excessive growth hormone production, puberty is frequently a time of unusually rapid growth due to hereditary and constitutional influences. Here, epiphyseal closure may be hastened by oestrogens. ie. cyclic administration of Progynon Depot 10 mg on the 1st., 4th., and 10th. day of the cycle; and Preluton Depot 250 mg. on the 10th. day of the cycle. Then, Pregynon Depot 10 mg. on the 5th., 9th. and 16th day of the cycle and Proluton Depot on the 16th. day of the cycle. It may be necessary to continue treatment until there is evidence of epiphyseal closure.

Summary

Puberty is a time of change and it is physiological. The change occurs over a period of about two years with its culmination in menarche although general physical, mental and emotional maturity proceeds apace during adolescence. Most of the disturbances are trivial, but as medical graduates we must be able to advise and guide our young patients and their anxious parents without letting them falling prey to quacks.

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ELECTRICAL PACING OF THE HEART A CASE REPORT

By

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INSERTION of a cardiac pace maker in the treatment of complete heart block is a common operation in most cardiology units. However, facilities for such an operation became available at the Thoracic Unit, Jaffna, only recently. The case history of a patient in whom an inductively coupled cardiac pace maker was used is presented.

Case History

Mrs. T. A. a 38 yrs. old mother of 4 children was referred to the Medical Unit of General Hospital, Jaffna, in May 1973 with a history of recurrent syncopal attacks. There was no history of fever, sore throat, chest pain, palpitation or difficulty in breathing. She had been previously healthy.

Examination revealed an intelligent woman in good general health. There was no orthopnoea, oedema, cyanosis, purpura, lymphadenopathy or skin rashes. Her peripheral pulses were readily palpable. The pulse rate was 32/min. and regular BP 140|100. There were cannon waves in the neck. Clinically the heart was not enlarged. There was no murmur but the intensity of the 1st sound in the mitral area was found to vary with each beat.

No abnormality was detected in the respiratory or the central nervous system.

Investigations:

W B C 14000, N—83, L—14, E—2, M—1%, E.S.R.—22mm in 1st hour, SGOT 45 units.

Blood culture — No growth: serum electrolytes Na—130 mEg|L and K—3·6 mEq/L; X'ray of chest—slight enlargement of all chambers of the heart.

E. C. G.—The P waves were normal in shape and the rate was 32|min. The Q.R.S. complexes were widened. The P. R. interval varied widely confirming the presence of complete heart block.

She was treated with sympathomimetic drugs ie. ephedrine and long acting isoprenaline (Saventrine). Though reasonable control of the pulse was obtained with these drugs, the patient continued to have an occasional Stokes Adams attack. Arrangements were therefore made to insert a pacemaker and the patient was transfered to the Thoracic Unit.

Operation and Procedure:

Cardiac monitor, defibrillator and drugs for the treatment of cardiac arrest and arrhythmias were kept ready at hand. Control of the heart rate during the operation was obtained by using an intravenous drip of isoprenaline.

In Oct. 1973 via a left antero-lateral thoracotomy the electrodes of an inductively coupled pace maker were implanated into the myocardium of the left ventricle. The inner coil was then placed in a subcutaneous pocket that was dissected out to overlie the second left inter-costal space.

The immediate post operative course was quite uneventful. The heart rate was maintained at a steady rate of 70/min. using the pace maker. All sympathomimetic drugs had been previously withdrawn. About 2 weeks after the operation it was realised that the subcutaneous pocket in which the inner coil had been implanted was infected. Culture of the infected fluid from the space grew Klebsiella aerogenes. The infection was controlled with parenteral gentamycin and with local instilation of neomycin and gentamycin.

She has been reviewed periodically at the Thoracic surgical clinic and remains an active housewife.

Discussion :

In 1774 Aldini reported the resuscitation of a 3 yr. old child who developed asystole following a fall. He used repeated transthoracic shocks using a galvanic battery device. Some 175 yrs. later Zoll 1st reported long term pacing in humans. The recovery of a 65 yr. old man with infarction-induced complete heart-block required 5 days of intermittent pacing via subcutaneous needles. But high thresholds were required and these caused painful contractions of the underlying pectoral muscle so that the procedure did not become popular. For the treatment of surgically induced heart block Weirick and associates (1957) anchored small diameter wires to the myocardium, and brought these out through the chest wall at the end of the operation. The current required to pace the heart was then only a few milli amps, and well below the threshold for pain. This method was effective and soon battery driven external pace makers were used to control not merely surgically induced heart block but also chronic heart block.

The need for a thoracotomy to insert these myocardial leads was a draw back till Furman, S., and Schwedel, J. B. (1959) used transvenously placed endocardial electrodes to maintain the heart rate in such patients. It was soon realised that long term use of an external pacemaker with electrodes gaining entrance through the skin carried with it the risk of infection, accidental disconnection and the inconvenience of a constantly worn external appliance. The natural development was the search for an implantable pacemaker.

A partially implanted induction coil pacemaker was introduced by Abram, L. D. Hudson, W. A. and Lightwood, R. (1960) This consists of two coils, an external which transmits low frequency oscillations and a subcutaneously burried internal coil which transmit these impulses via epicardial electrodes to the heart.

This carried the disadvantage that the patient had to always carry a relatively prominent apparatus strapped on to his waist and also it required the precise placement of the external coil on the internal. Displacement leads to uncoupling of the coils and alarming symptoms. Completely implantable pacemakers became available 10 yrs. ago and are the ones that are commonly used now.

Some of the indications for permanent pacing of the heart :

1. Frequent Stokes Adams attacks despite treatment with sympathomimetic drugs.
2. Very slow ventricular rates either unresponsive to medical treatment or intolerant of it.
3. Surgically induced complete heart-block.

Summary

Artificial electrical pacing of the heart is a treatment of proven effectivness and recourse to this method should not he delayed once it is apparent that drug therapy has failed to control the attacks.

Though many lives have been prolonged by artificial pacing and successful treatment may revolutionise a sufferer's life, the procedure is not without complications such as technical failures, infections and occasional pacemaker induced arrhythmia and should not be undertaken on a long term basis without good reasons.

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EXCESSIVE BLEEDING AFTER DENTAL EXTRACTIONS

By

N. THILLAIAMBALAM

Dental Surgeon, G. H., Jaffna.

THIS article is based on a study of 63 cases of post-extraction haemorrhage treated by the author. Bleeding due to systemic diseases or blood dyscrasias or that complicating the extraction of more than two teeth is not considered. Only the common local conditions leading to excessive bleeding are dealt with.

Prolonged and excessive bleeding after dental extraction is a serious problem. When excessive bleeding is due to a haemorrhagic disorder, the patient's life may be threatened and its management becomes difficult. Although a dental surgeon is expected to obtain a detailed medical history to exclude such bleeding tendency before embarking on an extraction, it does sometimes happen that such a history is not elicited and a systemic disorder is discovered for the first time on investigating the cause of excessive bleeding following an extraction. Stones (1966) refers to two patients with acute myelogenous leukaemia who presented with excessive bleeding as the first manifestation of this disease.

AETIOLOGY

Excessive bleeding may be due to local or general factors. Local factors are more often responsible (Moore, 1965). The specific factors that caused the bleeding in the present series of patients are listed in Table 1.

Table 1

1.	Misguided home care :	
	Excessive mouth washes ...	12
	Disturbance of clot ...	6
	Early removal of pack ...	13
2.	Lacerated wound margin ...	12
3.	Foreign body :	
	Bony spicule	7
	Others	1
4.	Infection :	
	Previous dental infection ...	7
	By neglected oral hygiene ...	2
5.	Miscellaneous	3
		63

The most common factor that caused excessive bleeding was misguided home care and ignorance of the patient. There were 31 cases who fell into this catorgory. Out of this number 12 had been rinsing their mouths very often to get the bloody taste out of them sooner. One kept ice to "freeze the blood" (in patients own words). 13 patients had removed the gauze pack within ten minutes after extraction preventing the formation of a firm clot. 6 had been exploring the socket with their tongue or finger and alarmingly one used a pencil to assess the depth of the wound.

Another factor of importance is the gross tissue damage resulting from clumpsy extraction leading to a tear of the mucoperiosteum and bony damage. In these there is very little or no protection of the

clot that forms well. In this series 12 cases were found to have lacerated wound margins. Associated with bone damage is the presence of bony spicule sticking into the gingival tissue; these act as foreign body and prevent retraction necessary for the arrest of bleeding. There were 7 such cases. Bony spicules were not the only foreign body causing excessive bleeding. One patient surprisingly had a big piece of arecanut acting as a foreign body.

Infection was the cause of bleeding in 9 cases. Infection may have occured before the extraction as in paradontal, apical or pericoronal infections. In two of these cases infection was due to gross neglect of oral hygiene. In these cases the clot formation was normal.

MANAGEMENT

In investigating a patient with excessive bleeding after dental extraction, it is very important to find out the results of previous extractions, operations or injuries in order to exclude any possibility of haemorrhagic disorders. A good history is vital. It must also include the number of teeth extracted and the duration of bleeding. The volume of blood loss is unreliable as lost blood is often diluted with saliva. Also it is best to do a laboratory investigation of bleeding time, cloting time, platelet count, W.B,C., D. C., and haemoglobin concentration. These tests will help to rule out any possibility of systemic disorders.

Next comes the assessment of the general condition of the patient. He should be admitted to the hospital if his condition is low. In this series ten patients needed admission. It is never a waste of time to clean the patient, for much of the distress and fear is due to the sight of blood on the face and clothing.

Attention to the local bleeding point must be paid as soon as possible. It is often noted that large clots almost fill the entire mouth and these should be sucked out, the tooth socket cleaned well and examined under good light. Special attention must be paid to any lacerated area. If any foreign body is present it is best removed without delay, preferably under local anaesthetic. If laceration is seen, it is best to suture the wound bringing the flaps together. In this series, except 12 cases with lacerated margin necessitating sutures, all other patients were treated in the following manner. The socket was cleaned free of old clot and debris under local anaesthesia, fresh blood was allowed to collect and clot and then the patient was asked to bite on a piece of sterile gauze tightly. 26 cases of bleeding was successfully arrested this way. In another 20 cases where this method failed, haemorrhage was arrested with vasoconstrictors ie. gauze soaked in adrenaline. In three other cases bleeding stopped only when styptics like Tincture of ferric chloride was used. In two patients when all these methods failed the wound was sutured with 'Gelform' kept in the socket.

Local pressure is the best available measure to control the bleeding. It should be the first line of action to be taken. When successful, the patient may be asked to keep the gauze pack tightly over the wound for another hour. If it failed, then use of haemostatic agents should be considered and arrangements made for suture in the first instance itself.

Once the local measures have controlled the bleeding, the patient's general condition should be assessed and should receive supportive treatment by administration of

either oral or intravenous fluids. Drugs to reduce anxiety and pain should also be given. It is better to keep the patient on a bed with his head raised and necessary advise given regarding the care of the wound. In all the 63 cases treated, some form of antibiotic was given, for it was thought that this helps to prevent secondary infections. However it may be necessary to collect some more data to come to any conclusions as to whether antibiotics are necessary prophilactically. Thoma (1969) mentions the necessity of tying the external carotid artery in extreme cases of bleeding when all other measures have failed.

Table 2

Summary of treatment given

1.	Ordinary gauze pack	26
2.	Vasoconstrictors	20
3.	Styptics	3
4.	Sutures when all above failed ...	2
5.	Sutures in the first instance ...	12

In conclusion, it is well to mention that misguided home care is often the most common cause of postextraction haemorrhage and that simple measures arrested the bleeding. To avoid confusion in the minds of the patients after dental extractions and to avoid unnecessary haemorrhage, it is better to give clear instructions preferably in writing, stressing the need to refrain from mouth washes, to avoid hot foods, alcohol and smoking for at least 24 hours and to keep the gauze pack tightly bitten for half an hour. As an emergency measure, if there is prolonged and excessive bleeding the patient should be asked to bite on a clean cloth rolled to form a pack and to report to the nearest hospital.

It is well to warn dental surgeons that a previous history of excessive bleeding must be investigated fully. To attempt an extraction on such a patient with an anticipation that bleeding can be controlled by local measures is to invite disaster.

I wish to sincerely thank Drs. R. Natkunam and V. Sivagnanavel for their valuable and helpful criticisms and suggestions.

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COMPLICATIONS OF CATARACT SURGERY

By

DR. R. CANAGARATNAM

(From his Presidential Address to the J. M. A. April '74)

CATARACT surgery forms the major part of eye surgery in this country. Complications after extraction of cataracts are not infrequent. In this address I wish to place before you my personal experience of cataract surgery and the complications I have met with. I must admit I am handicapped by the usual poor post-operative follow up of the patients usually due to their failure to turn up at the clinics.

A successful cataract operation depends greatly on the proper and adequate pre-operative assessment of the state of general health of the patient. This would include screening of the patients for diabetes, hypertension, enlargement of the prostate gland, urinary tract infections, any septic foci etc, and adequate control of them if any, before surgery. Anxiety if present should be allayed.

Majority of the operations are done under local anaesthesia. Routinely Chlorpromazine 25 mg and Promethazine 10—25 mg are given the previous night with Chlorpromazine 25 mg again on the morning of the operation. This is followed with Pethedine 75 mg. i. m. an hour before the operation. Patients who become / remain restless and disturbed after the above regime have to be operated on under general anaesthesia. During the injection of the local anaesthetic retrobulbar haemorrhage may occur and occasionally may be severe enough to necessitate postponing of the operation. Sometimes vitreous loss could occur wilh the retrobulbar haemorrhage.

This series consist of 412 cataract operations done by me at G. G. H. Jaffna between July '71 and March '74. The number and nature of the complications that occurred each year and their total in the series are given in the table. (page 31)

1. STRIATE KERATITIS :

This has not been included in the above table. This was seen in almost all patients to some extent and for varying periods and cleared by the time of discharge of the patient from hospital. In a few, keratitis persisted at the time of discharge. Unfortunately follow up of these cases have not been done.

2. VITREOUS LOSS :

This occurred in 49 patients ie. an incidence of 11·8%. The reported incidence of vitreous loss ranges from 1·5% to 12% in different series. The high incidence in my series was probably due to inadequate sedation and / or inadequate anaesthesia (local / general). Clumpsy use of forceps or erisophake also causes dislocation of the lens and vitreous loss. When chymotrypsin is used, excess of this causes rupture of the vitreous face and its loss. I have not used it on any of my patients. Other causes include raised intra ocular tension, prominent globe and thyrotoxicosis.

Immediate result of vitreous loss is diminution of visual acuity. Later macular oedema and degeneration sets in. Some end up with iritis and glaucoma. If a large

Year	Operations	Vitreous Loss	Shallow Anterior Chamber	Anterior Chamber Reformed	Hyphaemia	Iritis	Posterior Synechiae	Optic Atrophy	Post-Operative Infection	Macular Oedema	Vitreous Haemorrhage	Vitreous Detachment	Iris Prolapsed
1971	79	8	2	2	4	--	4	1	—	—	—	—	—
1972	125	17	3	1	6	6	2	3	3	—	1	1	3
1973	137	16	10	10	4	7	2	1	—	2	2	1	1
1974	71	8	11	5	4	3	2	—	4	1	—	—	3
Total	412	49	26	18	18	16	10	5	7	3	3	2	7
Percentage		11·8	6·3	4·3	4·3	3·8	2·4	1·2	1·7	0·7	0·7	0.48	1·7

amount of vitreous is lost the eye shrinks later. Replacement of the lost vitreous with 'Bank Vitreous' if available, helps considerably in the restoration of vision. At operation firm suturing of the cornea aud sclera with special attention to prevent the strands of vitreous being caught in the wound and the introduction of an air bubble into the anterior chamber after the iris has been replaced to form a round pupil, pushes the vitreous back into the posterior chamber.

3. SHALLOW ANTERIOR CHAMBER:

26 patients had shallow anterior chamber. In most of them this occurred on the 2nd post-operative day but reformed by the 5th post-operative day. A few, however ended up with glaucoma as a consequence of the formation peripheral anterior synechiae.

Improper apposition of the edges of the wound result in shallow anterior chamber. This is minimised by 'preplaced sutures' at operation. I use sutures only after section of the cornea but if the cornea gets rucked on tying them I remove the offending ones and resuture. Care has to be exercised to see that the suture does not enter the anterior chamber for epithelialisation of the tract so caused leads to loss of fluid

If the anterior chamber is not formed by the 5th post-operative day an air bubble must be introduced into the anterior chamber from the pas plana. Resuturing or additional sutures may be required if there is malapposition. In some patients with thin hyaloid membrane the vitreous bulges out causing vitreo-pupillary block. This leads to shallow anterior chamber and later glaucoma. Breaking of the vitreous face anteriorly and sometimes posteriorly too relieves the block and reforms the anterior chamber. This procedure also relieves the tension.

4. HYPHAEMIA

Hyphaemia was seen in 18 patients in the series and in all cases it cleared in the 1st week without any specific treatment.

This can arise either during or after the operation. During the operation it results from a scleral section or from an iridectomy. The bleeding may continue after the operation but stops soon. This gets absorbed in a day or two after the operation. Post-operative hyphaemia occurs about the 4th or 5th day with movement of the patient in bed. This hyphaemia is also absorbed in a few days. However, if the bleeding is excessive and is mixed with the vitreous then vision is not restored for several weeks till the blood is slowly absorbed. No specific treatment is of any use except in cases of blood dyscrasias or deficiency.

5. IRITIS

Inflammation of the iris occurs in almost all cases after cataract extraction but this subsides in a day or two. Persistant iritis leads to blurring of vision and discomfort from seeing through a mist. This could lead to mental depression. Blockage of the trabeculae at the angle results in glaucoma.

There were in all 26 cases of iritis of which 10 were only discovered later as posterior synechae, a sequela of iritis. These 10 cases may have had mild iritis and were missed in the post-operative follow up.

In one patient iritis was noticed after hyphaemia had cleared. This persisted for sometime and the flare settled with occlusio pupillae. Biomicroscopy showed a tag of gauze between the wound margin and the pupil.

6. MACULAR OEDEMA AND OPTIC ATROPHY

Hypotony resulting from a leaking wound results in papilloedema which may extend to the macula as well. I have treated these with Vitamin B injections resulting in considerable improvement of vision in most patients. Some patients with vitreous loss too end up with macular oedema and later optic atrophy.

7. VITREOUS HAEMORRHAGE

This occurred in three patients. One was due to extention of hyphaemia and another secondary to vitreous loss. Follow up records are not available to know their results.

8. IRIS PROLAPSE

Seven patients had iris prolapse. It results from sudden rise of intra-ocular tension as in coughing, etc. glaucoma, loss of anterior chamber, slipped suture knot and malposition of wound edges. This year I had three consecutive cases following coughing which resulted from ether anaesthesia (due to non avalability of Fluothane/ Triline). Re-suturing restored a normal pupil in these cases.

9. POST-OPERATIVE INFECTION

This is the worst complication that can occur after a successful operation. I had

three hypopyon ulcers in '72. This year in one operative session all four cases were infected. This was most probably due to contaminated saline and / or unsterile instruments. When infection occurs in a series of cases the organism responsible is probably Pseudomonas, being a contaminant in saline irrigations and other eye solutions.

These patients have pain, swelling of lids, photophobia, conjunctival injection, haziness of the cornea and turbid anterior chamber and sometimes hypopyon. In some cloudy film forms in the pupillary area. It is important to do the first post-operative dressing within 24 hrs. to detect these cases.

These patients had to be treated vigorously with antibiotics systemically and locally including sub-conjunctival injections. Selected patients require intra cameral injections of antibiotic. I have not tried intra cameral injections due to inability to obtain very sharp needles. Mydriatics were used to keep the pupils dilated. By timely and proper action being taken satisfactory vision was restored. Bilateral cataract operations are not done in one sitting for fear of possible infection of both eyes.

Extaction Of Congenital Cataract

I do the technique of needling and linear extraction in cases of congenital cataracts. These do vary considerably in their consistency. Some have well formed nuclei. Those which are fluid and milky break up easily. The needling, if not done carefully, would cause tear of the posterior capsule and vitreous face and prolapse of vitreous into the anterior chamber or out of the wound. Consequently glaucoma would result. Needling may have to be done several times before success could be achieved. In one patient I had to needle four times. In this patient the tension rose after the 3rd attempt and cyclodialysis was done later to reduce the tension and improve vision. Another patient had bilateral cataract. Needling proved unsuccessful even after the third attempt as the lens was pasty and did not break up and this eye was lost. However, the lens of the other eye was removed by intracapsular extraction like that of an adult and normal vision was restored with correction. Two out of the eight operations done by me were failures.

Cataract Extraction in Glaucomatous Patients

The Ophthalmologists problems do not end with the simple removal of a cataract. All Ophthalmologists aim to correct the vision to normality, failing which, to near normality at least. Majority of them, except for a few fastidious patients, are satisfied with what they see. But problems of vision do arise after extraction.

In bilateral cataracts occurring in both eyes simultaneously removal of one and its correction satisfies most patients. Further the other may be done in a few months time and corrected. However removal of cataract in one eye (when there is a long interval in their onset in both eyes) causes problems of vision such as amblyopia with tendency to squint and correction of the uniocular aphakia leading to diplopia and difficulty in focussing with both eyes. If the cataractous eye is the non dominant eye, then on the removal of the lens the patient will continue to use the dominant eye (even with slight vision) and will not be satisfied with the operation.

Other factors that make correction of aphakia difficult are :

(a) **Anisokonia :** There is a 33% increase in size of the image with false spatial orientation.

(b) **Spherical aberrabtion:** Distorted images are seen on looking through the centre of the lens.

(c) He has to co-ordinate movements with the new visual picture obtained by aphakic correction.

(d) **Jack-in-the box-phenomenon :** There is 10 degrees relative scotoma at the periphery of the lens. There is an anomaly of the field subtended by the lens and the area covered by the retina. Hence the object appears and disappears suddenly in that area.

Contact lens eased most of the problems of the uniocular aphake. Lighting techniques help in the self insertion of the contact lens in persons with bilateral aphakia. However, the elderly with shaking hands cannot insert the lens and would have to resort to normal spectacle lenses.

Conclusion

I have discussed the various problems and complications encountered in cataract surgery with special reference to my experience in Jaffna: and how they may be prevented and | or treated. The suceess of cataract surgery would depend on proper pre-operative assessment, aseptic and correct technique, proper nursing care and timely intervention to avoid impending catastrophe; and lastly the experience of the surgeon.

JAFFNA MEDICAL ASSOCIATION

SECRETARIES' ANNUAL REPORT 1973/74

The association has been quite active as in the past years.

Meetings:

We had regular meetings during the year except in December '73 and January '74. In all we had 20 meetings. In the 11 scientific meetings held, a large number of cases and problems were presented and discussed mostly by the Specialist staff of the General Hospital, Jaffna. It is hoped that the enthusiasm showed in the presentation of cases will continue unabated in the comming year too.

During the year Panel Discussions and Symposia become very popular with the members. Record attendance of the members have been noted at these meetings. We had discussions on Tuberculosis, Road Traffic Accidents, Diabetes Mellitus, Cholera, Bronchial Asthma, and Medical Education in Sri Lanka. We extend our appreciation and thanks to all who participated in these discussions and made them such great success.

We were not fortunate enough to have many guest lecturers as in the past year. However we had the following addressing us:

Dr. S. B. Ellapola, Pathologist, General Hospital, Badulla on 'Abnormal Haemoglobins'

Dr. N. M. Mendis, Epidemiologist, Colombo;

Dr. A. Sumeatno, WHO Consultant in Epidemiology; Dr. A. Sujathe, WHO Consultant in Epidemiology; and Dr. A. Velauthapillai, Bacteriologist, Colombo; who participated on the panel discussion on 'Cholera'

Dr. H. A. Jesudasan, Deputy Director, Public Health Services addressed us on 'The present epidemic of Cholera'. Dr. T. Varagunam, Senior Lecturer in Medicine, Faculty of Medicine, Peradeniya Campus and Dr. R. C. Bandaranayake, Senior Lecturer in Anatomy, Faculty of Medicine, Peradeniya Campus addressed us on 'Medical Education in Sri Lanka'

All these guest lecturers were experts in their respective fields and their talks were authoritative and well informed. We wish to record a big 'Thank You' to each one of them.

Social Activities:

Due to factors beyond our control it was not possible to organise 'Dinners' during the year except for the Annual Dinner on 18-5-74.

Membership:

Membership stands today at 124. The total number at the last Annual General Meeting was 71. The membership drive undertaken at the begining of the year resulted in the total number of members increasing to 152. The present drop is due to transfer of members out of Jaffna division and the new officers having not being enrolled as yet.

Post-graduate Course:

For the first time the association ventured into the field of post-graduate

course of studies and has emerged with considerable success. It was intended to have courses of studies in all the three main disciplines of Medicine, Surgery and Obstetrics & Gynecology. However due to poor response from members classes in Surgery and Obstetrics & Gynecology could not be held. The post-graduate classes in Medicine started on 5th August '73 with 35 members in the class. We had weekly lectures on Saturdays till February '74. There were quite a number who dropped out especially after the Cholera epidemic. It is heartening and encouraging to note that 3 candidates out of 9 who eventually appeared for the MRCP Part I examination were successful. Our congratulations to Drs. Gunasundaram, Kamalarajan and Rajkumar, on their success.

Library :

In spite of considerable difficulties we have managed to obtain regularly journals in the main disciplines of Medicine, the yearly cost of which is Rs. 782/-. Of late some issues of the journals have not reached us. This appears to be due to postal pilferage. Steps will have to be taken to ensure receipt of these journals regularly.

Jaffna Medical Journal :

The lack of medical advertisment has delayed the publication of the journal this year.

Departures :

We note with regret that some of our most active members have left us during the year. Drs: B. A. Mills, S. Sinnathamby, K. Jeevaratnam, S. Thiagalingam and R. Theivendiran have left to better their prospects and we take this opportunity to wish them success in their new ventures.

In conclusion we take this opportunity to thank the President, members of the council and all the members of the association for their kind co-operation which had made the discharge of our duties easy and pleasant. We wish to say a special word of thanks to Drs. S. Mahendiran and S. Shanmugalingam for their unstinted and voluntary help rendered to us and the association.

Thank you,

Dr. S. Subramaniam & Dr. A. Mylvaganam
Hony. Joint Secretaries

JAFFNA MEDICAL ASSOCIATION

POST GRADUATE LECTURES IN MEDICINE 1973/374

These lectures were held on Saturday afternoons from 3-6 p.m. from the first week of August 1973. The following Consultants formed the tutorial panel.

Dr. S. Subramaniam
Dr. P. Kulendiran
Dr. Yogu Pasupathi
Dr. K. Thiagalingam
Dr. R. Natkunam
Dr. V. Sivagnanavel
Dr. C. Mahenthiran
Dr. (Mrs.) S. Kulendiran
Dr. S. Sathanandan
Dr. A. V. A. Vethanayagam
Dr. V. S. Pathmanathan
Dr. (Mrs.) A. Natkunam

The course covered lectures in all important branches in Medicine like Cardiology, Genetics, Immunology, Neurology, Psychiatry, Nephrology etc. and wound up with four revision classes and M. C. Q. paper discussions. An advance weekly programme was circulated among the members of the course.

About 35 students enrolled for the course on the first day. This dwindled to 13 on the third working day and to 10—12 during the balance period. Nine members appeared for the M. R. C. P. Part I examination held on the 7th of February '74 and three of them were successful. Our Congratulations to them.

As directed by the council a fee of Rs. 20/- per month was levied. The total amount realised was Rs. 1330-00. Of this Rs. 667-25 was spent on refreshments, postage etc. It was decided to utilise the balance, Rs. 662-75, to purchase books for the library. The following books (value Rs. 202-00) have already been presented to the library as a gift from the students of the post graduate course in Medicine.

1. Medicine — Cecil and Loeb
2. Pharmacology — Lawrence.
3. Aids to Post Graduate Medicine — Burton
4. Applied Physiology — Cambell, Dickinson and Slater.

The entire course was planned, organised, letctures scheduled and a major portion of the syllabus tackled by our energetic secretary Dr. S. Subramaniam. We wish to thank him and all the lecturers for having expended their precious time and energy towards the success of this course.

Sgd. Dr. A. Mylvaganam
Course Secretary

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- washing of masks, caps & gowns
- washing of surgical instruments.

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