THE CEYLON MEDICAL JOURNAL

Established 1887

Volume 35, No 4, December 1990

CONTENTS

Leading Articles	131	**Kidney storage for transplantation** Tara de Mel
	133	**Cryptosporidiosis** Jennifer Perera
SLMA Oration	136	**Role of planned parenthood for enrichment of the quality of life in Sri Lanka** Siva Chinnatamby
Case Reports	143	**Granulomatous mastitis — a well defined entity** M P Kumarasinghe, L R Amarasekera
	146	**Dilemmas in the diagnosis and management of intra-cavernous aneurysm** J B Peiris, Padma S Ranasinghe S B Gunatilake, B M Selladurai
	148	**Tuberous sclerosis presenting as an intravascular tumour** Saman B Gunatileke, P S Ranasinghe, J B Pieris, B M Selladurai
Occasional Review	151	**Tumour necrosis factor** D G Harendra de Silva
Letters to the Editor	154	**Intravenous frusemide and Intramuscular reserpine — inexpensive regime for the treatment of severe hypertension** U Illangasekera
	155	**An unusual mis-identification** K M H Perera, M K G R de S Jayawardena
Point of View	156	**Building bridges between doctors and patients** Jack C S Ling, Paul Barefield

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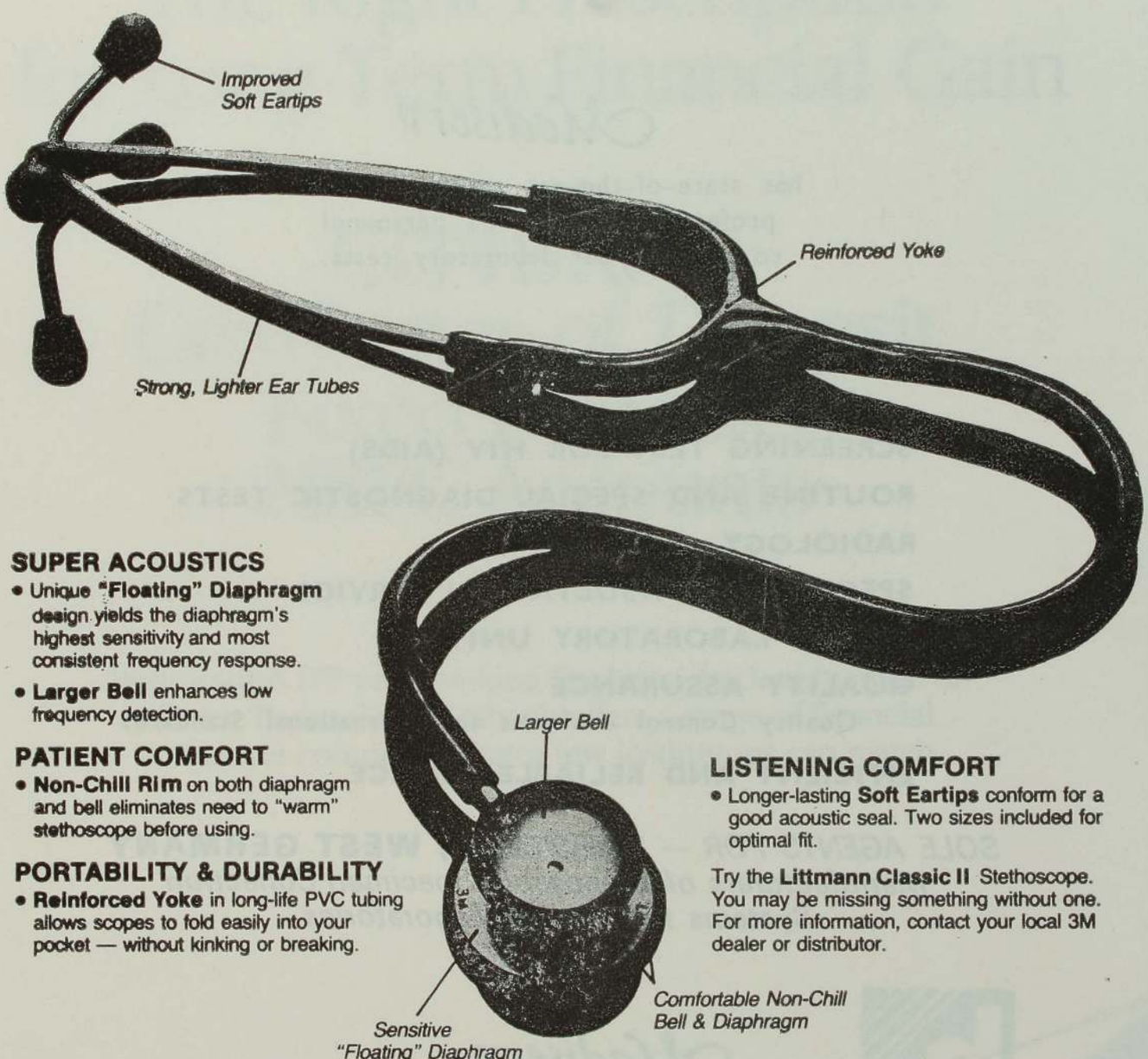

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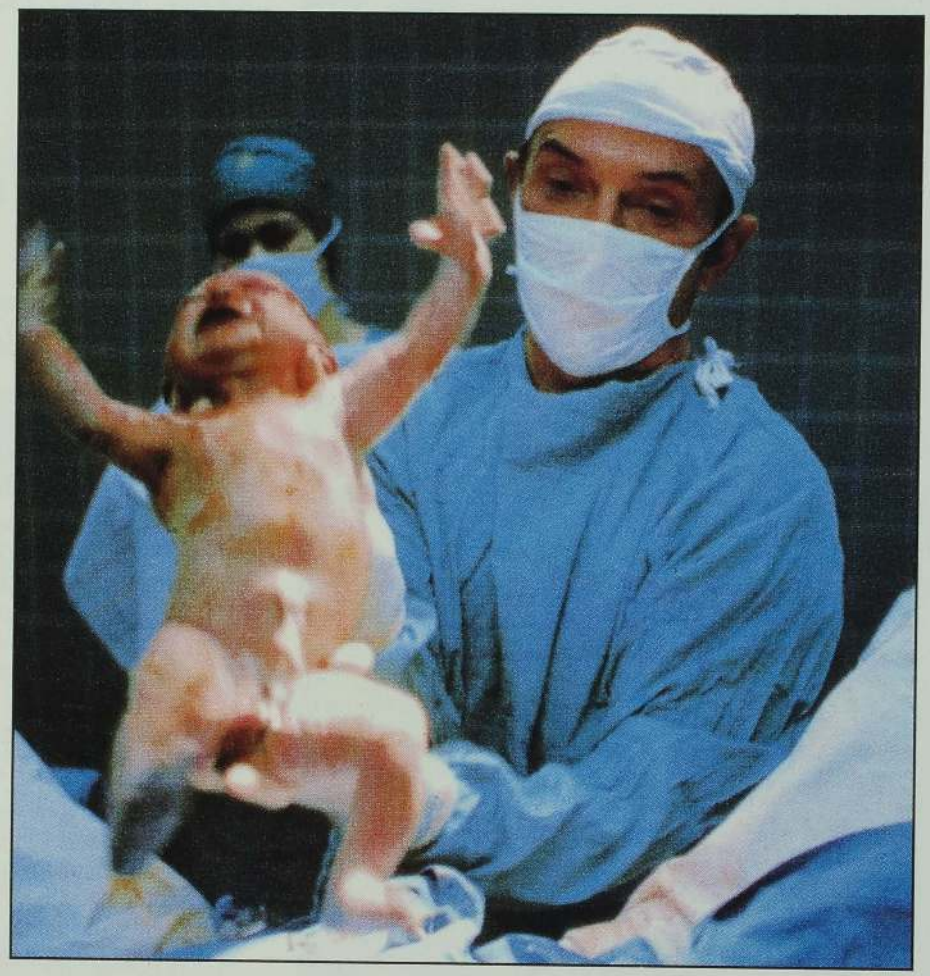

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References : 1. Finstad, R.,Brit.J.Clin. Pract. 1981.35,35-39. 2. Goldie I.F.1982, Am.J.Med.72(2A),50-53. 3. Sydnes,O.A., 1982,Am.J.Med.,72(2A),31-33. 4. Wade, A.G.,1981, Eur.J.Rheum.Inflam.,4,357-363. 5. Huskisson,E.C. Greenwood, A.,1983, Eur.J.Rheum.Inflam.6,242-246. 6. Keitel, W.,1984, Eur.J.Rheum.Inflam,7,105-113.

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**Thomas RJS. "Patient Management in the Transition Between Parental and Enteral Nutrition. "*Enteral Nutrition*, Mead Johnson Symposium Series No. 2, 145.

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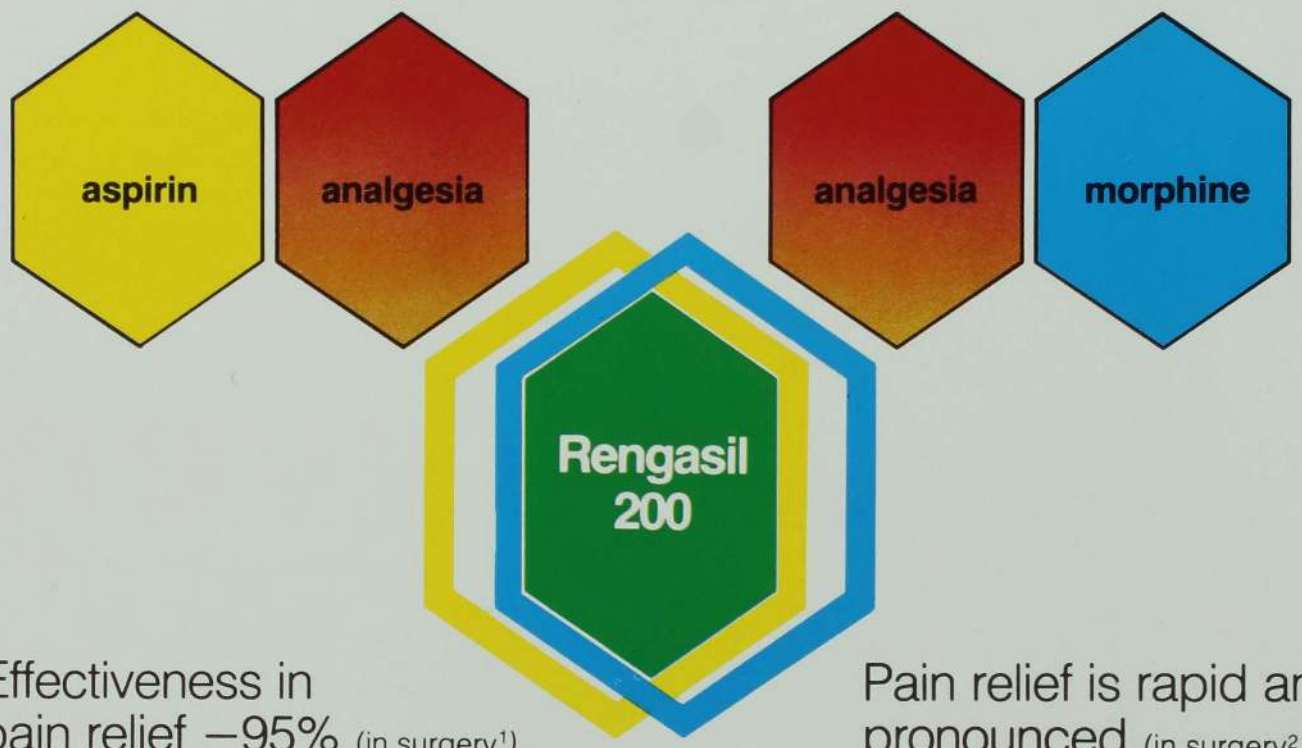
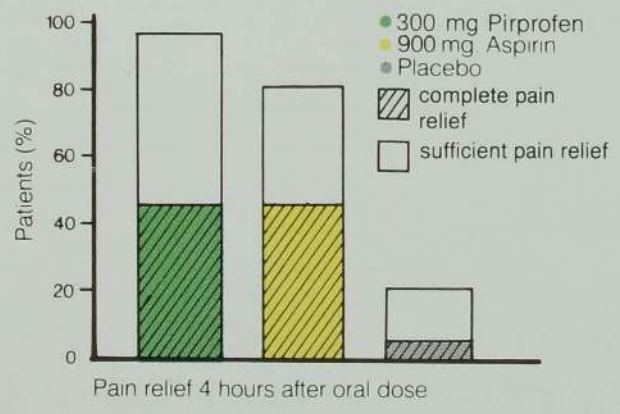
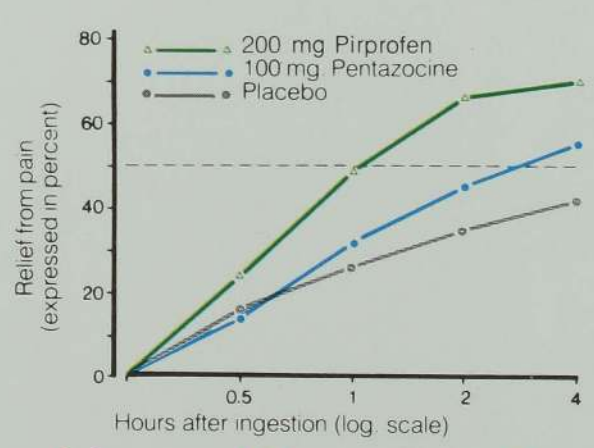


Effectiveness in pain relief –95% (in surgery[1])



Pain relief is rapid and pronounced (in surgery[2])



A sensible balance between aspirin and the narcotics

Composition: Pirprofen, capsules of 200 mg. **Indications:** Degenerative, inflammatory, and non-articular forms of rheumatism; osteoarthrosis, including spondylarthritis; rheumatoid arthritis and ankylosing spondylitis; lumbago and sciatica. Moderate and severe pain of non-rheumatic origin. Acute attacks of gout. **Dosage:** Adults (oral administration): one caps. of 200 mg three times daily. If necessary, up to 1,200 mg daily may be prescribed for 1 — 2 weeks. **Contra-indications:** Rengasil should not be prescribed in the presence of peptic ulcer, active liver disease, or hypersensitivity to the active substance. Rengasil is also contra-indicated in asthmatic patients in whom attacks of asthma, urticaria, or acute rhinitis are precipitated by acetylsalicylic acid or by other drugs with prostaglandin-synthetase inhibiting activity. **Precautions:** Patients with gastro-intestinal symptoms or with a history of peptic ulcer or accult gastro-intestinal bleeding, as well as those with severely impaired renal or cardiac function, should be kept under close surveillance. During long-term treatment, regular monitoring of liver function is recommended. Whenever persistent abnormalities in liver function test values are observed, treatment should be discontinued. Rengasil should be employed with caution in patients showing abnormalities of blood coagulation or a tendency to haemorrhage, as well as in those receiving anticoagulants. **Unwanted effects:** Rengasil is generally well tolerated; as with other non-steroidal antirheumatic and analgesic agents, however, nausea, heartburn, epigastric pain, or diarrhoea may occasionally occur. Isolated occurrences of peptic ulcer as well as of elevated transanimase values have been observed, sometimes together with elevated alkaline phosphatase levels, these elevations were usually transient. **Packages:** Rengasil is supplied in packs of 30 and 100 caps. of 200 mg.

Further information is available on request.

A. BAUR & CO LTD.
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CIBA

1. M. Hultin: K-J Olander: Comparison of pirprofen, acetysalicylic acid, and placebo in post-operative pain after oral surgery.
2. Sperr W.: In van de Korst. (Editor) A new antirheumatic-analgesic agent: pirprofen Int. Symp., IXth Europ. Congr. Rheumatol; Wiesbaden 1979.

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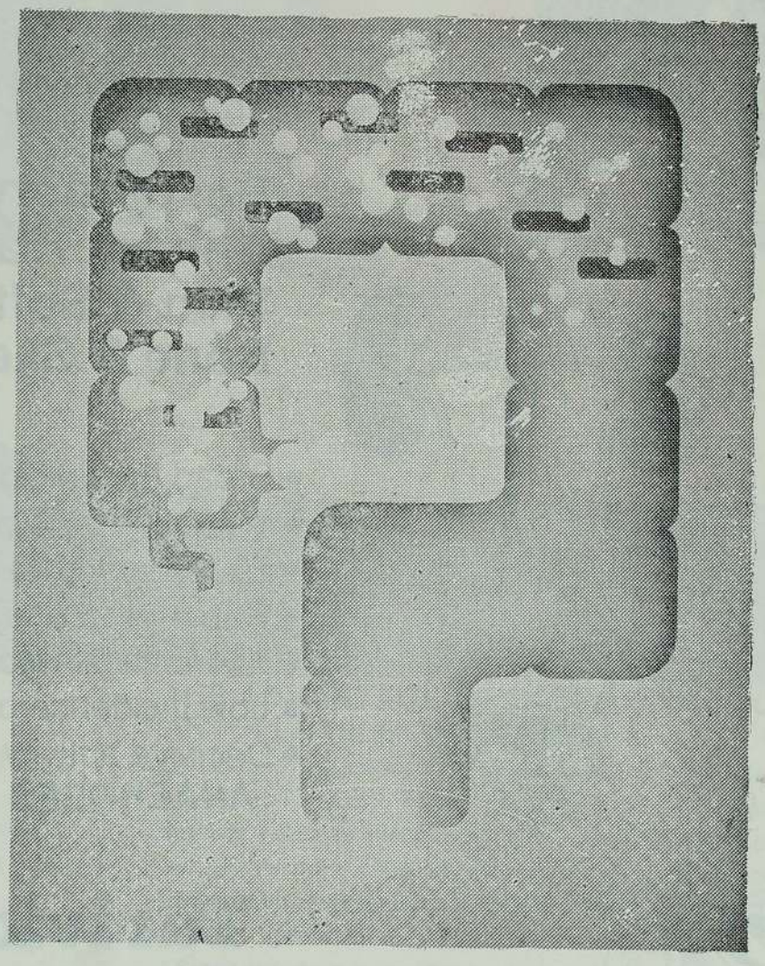
Duphalac is an almost unabsorbable sugar, which is broken down by the intestinal flora into low molecular weight organic acids, in an identical way to unabsorbable carbohydrates, promoting physiological bowel movement, ensuring soft stools and easy evacuation.

Because of its gentle, natural action and absence of unwanted effects, Duphalac can be given to patients in whom special caution is required, such as:

- Pregnant women
- Lactating women
- Infants and children
- Post-operative patients
- Elderly patients.



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Duphalac initiates return to normal physiology of the colon. It may therefore take up to 48 hours before normal defaecation occurs. The total daily dose is taken preferably during breakfast. The dosage for constipation can be varied according to the individual response, but the following serves as a guide:

	starting dose for 3 days	maintenance dose
	per day	per day
ADULTS – severe cases	30-45 ml	15-25 ml
ADULTS – moderate cases	15-30 ml	10-15 ml
ADULTS – mild cases	15 ml	10 ml
CHILDREN 6-14 years	15 ml	10 ml
CHILDREN 1- 6 years	5-10 ml	5-10 ml
INFANTS	5 ml	5 ml

HEPATIC PRECOMA AND COMA

Initial dose: 30-50 ml (40-67 g) three times daily. Maintenance dose: to be adjusted to the individual response, diarrhoea must be prevented.

Lactulose is not absorbed significantly and has almost no caloric value. Duphalac syrup contains next to lactulose, galactose and lactose°. This should be taken into account when treating patients who are on a lactose or galactose -free diet.

° 100 ml Duphalac contains 67 g lactulose, < 11 g galactose and < 6 g lactose

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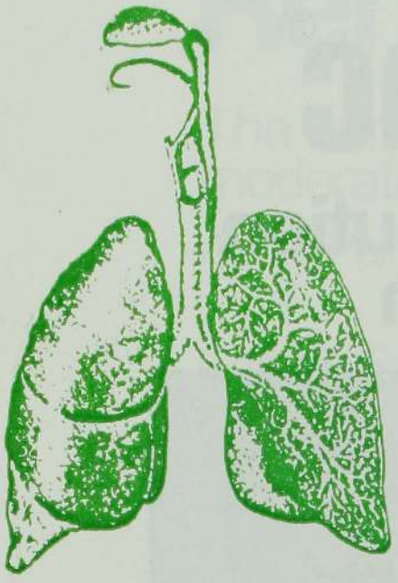

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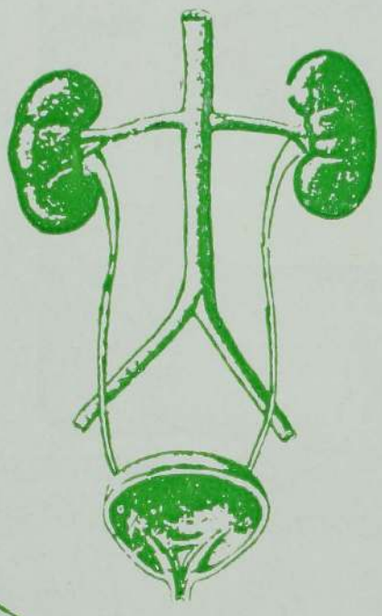

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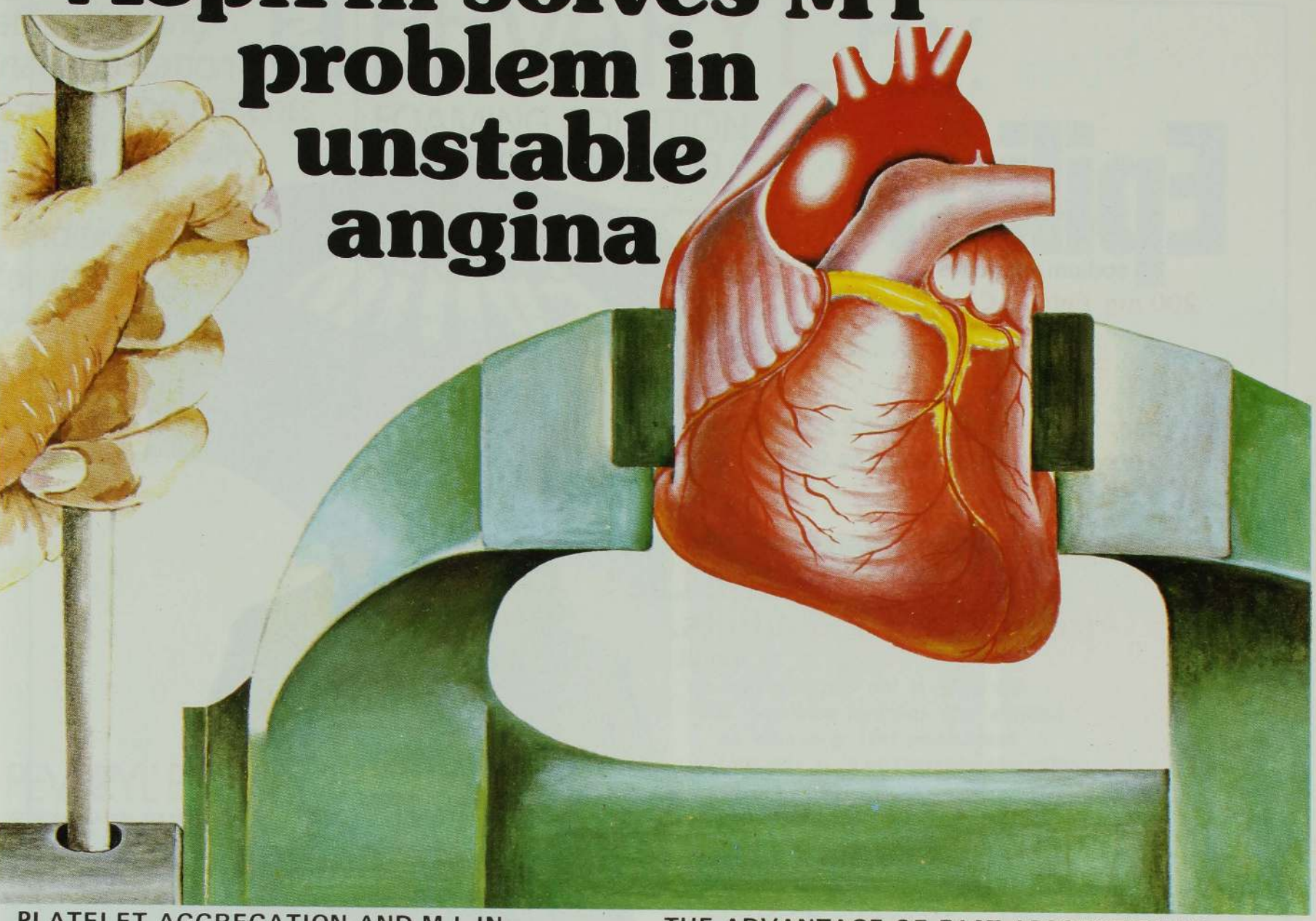

PLATELET AGGREGATION AND M.I. IN UNSTABLE ANGINA

The fact that platelet aggregation has been implicated in the pathogenesis of atherosclerosis and its complications, and that aspirin inhibits platelet aggregation prompted Lewis et. al. to undertake the Veterans Administration Co-operative Study[1] of aspirin treatment in men with unstable angina.

VETERANS ADMINISTRATION CO-OPERATIVE STUDY[1]

The objective of the multicentre, double blind, placebo-controlled randomized trial was to determine whether aspirin can reduce the incidence of death and acute myocardial infarction in men with unstable angina. 1266 men with unstable angina were assigned to receive a single daily dose of aspirin 324 mg. in solution or placebo for 12 weeks.

PROTECTIVE EFFECT OF ASPIRIN AGAINST ACUTE M.I.

The data evaluated showed that aspirin has a protective effect against acute myocardial infarction in men with unstable angina, and they suggest a similar effect on mortality. The combined incidence of death or acute myocardial infarction was 51% lower in the aspirin group than in the placebo group.

THE ADVANTAGE OF FAST ABSORPTION IN ANTI-PLATELET ACTIVITY

Sansom in his paper "Clinical implication of salicylate pharmacokinetics" [2] points out that the anti-platelet activity requires the intact acetyl-salicylic acid molecule and is therefore a function of the blood concentration of aspirin, whereas salicylic acid does not significantly influence platelet function.

"Since the drug is rapidly hydrolysed to salicylic acid in the gut wall and liver, higher blood levels of aspirin (ASA) are achieved following rapid absorption."

SOLUBLE ASPIRIN – THE DRUG OF CHOICE

Sansom also points out that the type of formulation can significantly alter the rate and level of drug absorption, and hence the therapeutic effect. Most rapid absorption is observed with solutions of aspirin. It is thus evident that in the prophyiactic treatment of cardio-vascular disease soluble aspirin is the ideal preparation.

1. **H.D. LEWIS et. al. NEW ENGLAND JOURNAL OF MEDICINE, 1983, 309 (7) 396.**
2. **L.N. SANSOM, THE AUSTRALIAN JOURNAL OF PHARMACY, April 1983.**

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	Starting Dose	Usual Range	Maximum Dose
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Children over 20kg	400mg	20-30mg/kg	35mg/kg
under 20kg	20mg/kg		40mg/kg

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(ROBERTSON AND GOVIND, 1986)

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PITYRIASIS VERSICOLOR

Pityriasis versicolor (or tinea versicolor) is a superficial non-inflammatory mycosis characterised by an eruption of macular and scaly lesions in varying colours, hence 'versicolor'.

Typical fawn-coloured lesions barely visible to the naked eye

Idem, under Wood's lamp with filter

Slightly scaly, achromic spots

REPRODUCED BY KIND PERMISSION OF PROF. J. DELACRETAZ, LAUSANNE

'The disease ... gives rise to multi-coloured mottled skin lesions, which are very unpleasant because of their unsightly appearance. With a pronounced tendency to relapse, Pityriasis versicolor raises difficult therapeutic problems.'

(BALUS AND GRIGORIU, 1982)

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(SCHERWITZ AND MARTIN, 1978)

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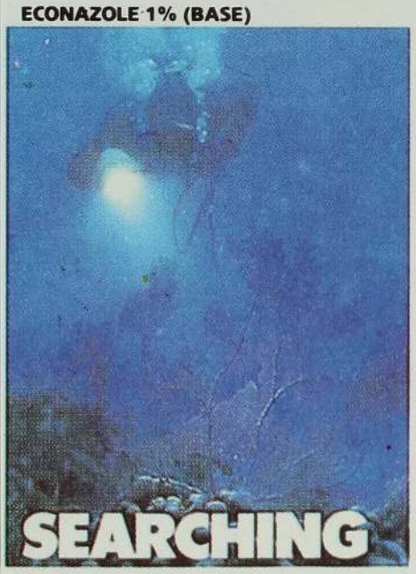

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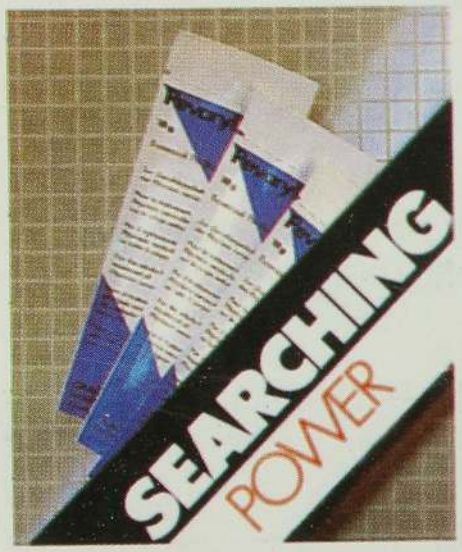

INITIAL THERAPY

Depending on the severity of the condition, 1 sachet each night for 3 to 9 days.

FOLLOW - UP THERAPY

Application of one sachet after 1 month, and after 3 months is recommended, followed by 1 application in the following year prior to exposure to sunlight. In tropical countries it is advisable to maintain application at 3 month intervals.

A different regime is, of course, left to the physician's descretion.

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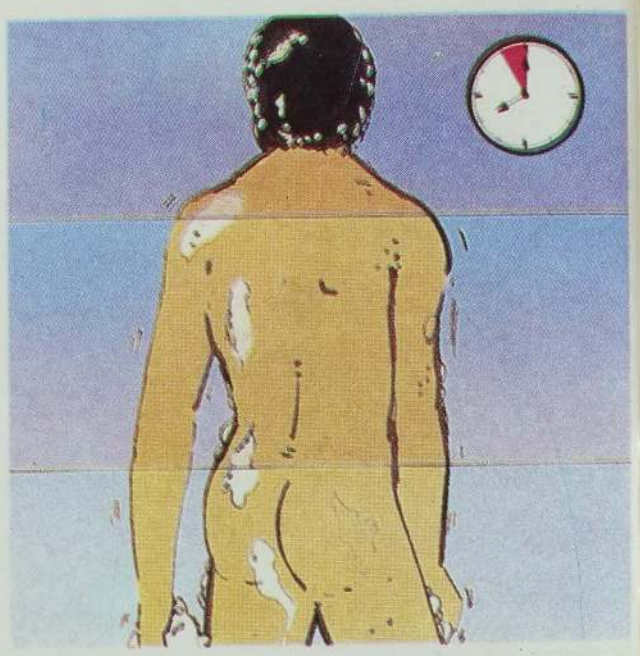
METHOD OF APPLICATION

1 In the evening, shower and wash hair with usual shampoo.



2 Apply Pevaryl P.v. to the moist body and scalp, using about a third of a sachet on the scalp, a third to affected areas and the remaining third to the rest of the body.
Rub well in for about 5 minutes.

3 Dry hair but do not rinse body.
Allow the foam to dry on body.

4 Next morning shower if desired.

SUITABILITY

Specifically for whole-body treatment of Pityriasis versicolor.

- RAPIDLY ALLEVIATES PATCHING AND SCALING.
- SIMPLE TO USE – ONE SACHET PER DAY.
- PERMITS LONG CONTACT TIME FOR BETTER CURE RATES.
- RE-OCCURRENCE AVOIDED BECAUSE INFECTION IS ELIMINATED AT APPARENTLY CLEAR SITES.
- PLEASANT, ODOURLESS, COLOURLESS, NON-STAINING FOAM.
- SIMPLE FOLLOW-UP OR PROPHYLACTIC TREATMENT.

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THE CEYLON MEDICAL JOURNAL

Established 1887

The Official Publication of the Sri Lanka Medical Association

Volume 35 No. 4 December 1990 — Quarterly ISSN 0009-0875

All communications should be addressed to **The Editor, CMJ**

Published by
The Sri Lanka Medical Association
Wijerama House,
6, Wijerama Mawatha
Colombo 7
SRI LANKA
Telephone 693324

Printed by
S Devendra
Ananda Press,
Colombo 13
SRI LANKA
Telephone 435975

Exporting death. Britain's malignant epidemic spreads to the developing world.

That tobacco use is a true addiction is now widely accepted.

In his 1988 Report the US Surgeon General concluded that:

1. Cigarettes and other forms of tobacco are addicting.

2. Nicotine is the drug in tobacco that causes addiction.

3. The pharmacological and behavioural processes that determine addiction to tobacco are similar to those that determine addiction to drugs such as heroin and cocaine. Although the legalized sale of an addictive substance is bound to be very profitable to the tobacco industry they find the report threatening. It is true that tobacco use does not produce the same immediate social problems as addiction to alcohol or hard drugs, but it causes far more deaths throughout the world. In the UK about **350** deaths a year are due **to hard drugs,** perhaps **25 000 to alcohol but 100 000 premature deaths result from smoking.**

Falling sales in the UK and other industrialized countries has led the industry to step up tobacco promotion by all possible means in the developing world. In this they are helped by lack of awareness of its lethal effects, by the prolonged incubation period before the health consequences appear, by unrestricted **advertising,** and by the attraction for governments **of tobacco sales which are an easy method of tax collection-**

Editorial — *British Journal of Addiction*, 1990: **85:** 313–314

The world's biggest killer — figures for UK

Smoking is the largest preventable cause of death in the United Kingdom, claiming some **100 000** lives every year — more than **four times** as many people killed by all other known avoidable causes of death put together. Of 1 000 young people who smoke 20 or more cigarettes a day six will die in road accidents but 250 will die prematurely because they smoked. Smoking even 10 cigarettes a day gives an individual a **one in 200** chance of dying in any one year, compared with a **one in 8 000** chance of being killed on the roads. Some people killed by smoking may have died prematurely anyway but others would have lived **10, 20, 30 or more years longer** and their deaths are often preceded by years of disabling illness.

It is estimated that at least **90%** of deaths from lung cancer are attributable **to smoking,** 90% of deaths from chronic bronchitis and emphysema and about a quarter of the deaths from heart disease, the commonest form of death in the UK today. **There is no safe level of smoking — it is always dangerous.**

Passive smoking — **breathing other people's smoke — is also a health hazard.** The Government's Independent Scientific Committee on Smoking and Health has said that, because of the health risks of passive smoking, "non-smoking should be regarded as the norm in enclosed places frequented by the public or employees, special provision being made for smokers, rather than vice-versa". The Committee estimated that several hundred of the 40 000 deaths from lung cancer each year might be caused by passive smoking. Furthermore, it found that children of parents who smoke suffer more respiratory illness than other children.

Action on Smoking and Health, Information Bulletin, May 1988.

INSTRUCTIONS TO AUTHORS

The following are the **minimum** requirements for manuscripts submitted to the CMJ for publication.

All authors must give signed consent for publication, and the posts held at the time they did the work.

Three copies should be submitted typed on one side only of A4 paper with double spacing and 5 cm margins at the top and left hand side.

Only standard abbreviations of units should be used in the text.

References should be indicated by a superscript number in the order in which they appear in the text, and listed in this order at the end of article.

SI units are used for scientific measurements, but blood pressure should continue to be expressed in mm Hg.

Statistical procedures should be described in methods section or supported by references.

Tables and illustrations should be separate from the text of the paper. Tables should be simple and should not repeat information in the text of the article.

Letters to the Editor submitted for publication must be signed personally by all authors.

The Editor reserves the right to style and if necessary shorten articles accepted for publication and to determine priority and time of publication.

Leading Article

Kidney storage for transplantation

Ceylon Medical Journal, 1990, **35**, 131–132

The ability of organs to remain viable outside the body and subsequently resume function on reimplantation, once a dream but now a reality, owes much to the vast progress made in the growing field of transplantation. The original development of solid organ grafting dates back to the late 18th century[1]. But, grafting an organ on a vascular pedicle became technically feasible only in the first decade of this century.

Experimental models have demonstrated that ischaemia, initially leads to hypoxia and eventually to total anoxia, thereby causing death of tissues. Electron microscopy of renal tissue after varying periods of ischaemia led to the establishment of a characteristic pattern of degenerative changes in the human kidney[2]. Warm ischaemia (at 37°C) is known to affect the entire nephron, with the proximal tubule showing the greatest sensitivity. Cellular degeneration which begins to show about twenty minutes after the onset of ischaemia, was found to be reversible up to thirty minutes, but completely irreversible after sixty. The histological findings affected the cytosol, mitochondria, endoplasmic reticulum and lysosomes of all tubular cells.

The complex metabolic changes that ensue in an ischaemic kidney result in the perturbation of all homeostatic mechanisms in the living tissue. These changes stem from depleting oxygenation of renal tissue. Degradation of adenosine triphosphate (ATP) and other high energy phosphates leaves the ischaemic cell with very little energy for vital functions. ATP dependent sodium/potassium transmembrane pumps which are responsible for prevention of sodium influx into the cell cease to operate, thereby causing cellular oedema, a fundamental problem in organ storage. Similarly inactivation of the calcium ATPase pump fails to maintain the cytosolic calcium levels leading to imbalance of the cation eventually resulting in irreversible cellular damage. In the absence of adequate oxygenation, to maintain energy levels the cell resorts to anaerobic metabolism via glycogenolysis and glycolysis. This leads to accumulation of lactic acid which contributes largely to the intracellular acidosis and degeneration of the stored organ.

Hypothermia ameliorated these detrimental effects of ischaemia and hence became the cornerstone for storage of organs and tissues. However, subsequent studies showed that low temperature preservation gave rise to additional damaging effects[3]. Cellular oedema, due to inhibition of the sodium/potassium ATPase pump was one, and the generation of toxic, oxygen–derived free radicals was another.

The strategies devised to enhance preservation of organs using hypothermia are vascular flush followed by cold-storage, continuous machine perfusion and retrograde oxygen persufflation (ROP)[4].

During flush–storage the organ is first rapidly perfused with cold preservation solution, the objective being to cool the core of the kidney as fast as possible. This method also ensures that the organ is completely cleared of blood, thus preventing sludging of red cells in the microcirculation. Soon after perfusion the organ is immersed in the same preservation solution at 0°C and stored in slushed ice for 24 to 27 h. Continuous machine perfusion involves perfusion of the kidney, from the time of harvest to revascularisation, with special solutions at intermediate hypothermia (10° to 15°C). This method carries the disadvantages of being more expensive and complicated, requiring sophisticated technology and large volumes of perfusate. Although both methods have given similar results for short term kidney preservation the latter has been largely abandoned in most centres specialised for cadaver transplantation. The technique of ROP uses the principle of gaseous perfusion of the donor kidney retrograde *via* the renal vein. This method ensures adequate oxygenation of the whole organ without elevating intrarenal pressure and also enables organs subjected to warm ischaemia to be used in transplantation. But kidneys damaged by warm ischaemia had to be eliminated from transplant programmes, so that ROP is now used almost exclusively for laboratory research.

Of the three methods described, vascular flush followed by cold–storage is the method routinely employed in centres specialising in cadaver organ storage. The solutions currently used are Marshall's citrate, Collins's and University of Wisconsin[5]. These "intracellular',

type solutions (high in potassium, magnesium and low in sodium) mimic the ionic composition of the intracellular compartment. By minimising ionic gradients between the intra– and extracellular compartments, redistribution of the important cations and subsequent cellular oedema are prevented[5]. In addition the inclusion of high molecular weight cellular impermeants and other oncotic agents prevent the cells from imbibing water. A potent buffer is a vital constituent in all types of storage solutions to minimise intracellular acidosis. Other components of these solutions include calcium channel blockers (to prevent calcium redistribution), free radical scavengers and antioxidants (to prevent oxidative stress), precursors for energy synthesis, and other like drugs and hormones, all of which are thought to help maintain viability during storage[5].

The design of different methods of organ preservation for optimal function after transplantation depends on the study of organ viability at a biochemical and physiological level.[6] While the demonstration of adequate *in vivo* function is the obvious goal, it is often difficult to make detailed meaningful studies of specific cell processes because of their complexity.

The main methods for *in vitro* study are the use of homogenates, tissue slices, cell suspensions and the isolated perfused whole organ. Studying the isolated whole organ does not allow the investigation of intrinsic cellular metabolic changes, independent of the effects of restoration of blood supply to the retrieved organ. Nevertheless it mimics actual transplantation and enables the study of post–transplant renal function to reasonable extent. Tissue slices and cell suspensions make it possible to investigate cellular metabolic changes that occur due to storage alone[7 8]. This enables the development of protective protocols that could be incorporated into preservation methods and solutions[9].

During the past two decades the development of new and better cold-storage solutions and improved organ preservation technology, have allowed transplantation to change from an emergency procedure to a more elective one. Multi-organ procurement from the cadaver donor has made it possible for other intra-abdominal organs like the liver and pancreas to be harvested and transplanted successfully to suitable recipients. Storage periods ranging from 24 h (in the case of the pancreas) to 72 h (in the case of the kidney) have been demonstrated with new storage solutions[10]. Better histocompatibility matching, and the introduction of cyclosporine have greatly improved early graft function and the long term survival of transplant patients. With large numbers of patients awaiting cadaver donors, advances in methods for cold-storage and large scale national and international organ sharing have become a pressing need in present day medicine.

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Leading Article

Cryptosporidiosis

Ceylon Medical Journal, 1990, **35**, 133–135

The intestinal protozoan cryptosporidium is a coccidian parasite related to toxoplasma. It is a well known cause of diarrhoea in animals but has been recognized only recently as a cause of human disease. It can infect many species of mammals, birds and reptiles, and a random survey showed that sera from ten mammalian species including man contained detectable antibodies to the organism.[1]

The life cycle of cryptosporidium is similar to that of other organisms in the class sporozoa.[2] It is a monoxenous cycle as development occurs in a single host. Oocysts obtained from faeces of infected animals are immediately infective for other animals, unlike toxoplasma, which requires a period of incubation outside the host before they become infective. The fact that chronic cryptosporidiosis can continue for months or even years suggests that cryptosporidium can undergo multiple cycles of schizogony at least in the immunodeficient host.

Cryptosporidia were first observed by Tyzzer in 1907 on the gastric mucosa of asymptomatic mice[3]. They were not associated with disease until 1955 when cryptosporidium associated diarrhoeal illness was reported in turkeys.[4] Since then reports of cryptosporidium in calves lambs, pigs and other animals have become common. More severe clinical illness was observed in young animals than in the old. The first case of human cryptosporidiosis was reported in 1976 in a three year old girl who had vomiting and diarrhoea.[5] Since then cryptosporidiosis has been observed to be an important complication in patients with Human Immunodeficiency Virus (HIV) infection and other immune deficiency disorders. Recently there have been many reports of acute diarrhoea associated with cryptosporidium occurring in apparently immunocompetent adults and children.

A major determinant of severity of human disease is immunologic status. Patients with normal immune function are either asymptomatic or develop diarrhoea with mucus, but without blood, accompanied sometimes by abdominal pain, nausea and vomiting. Mild fever is observed in a few. The disease is self-limiting in immunocompetent patients, and only symptomatic treatment and rehydration are necessary. Duration of illness ranges from 7 to 12 days and incubation period is about a week. As in the case of animals, infection is more common in children than in adults.

In immunocompromised patients on the other hand, it causes a severe protracted watery diarrhoea which lasts for months and carries a high mortality. In adults this has been described mostly in patients with HIV infection, while children have had hypogammaglobulinaemia or have been receiving immuno-suppressive treatment for malignancy or renal transplant. To date therapy for cryptosporidiosis is supportive. Although a wide range of antiprotozoals and antibacterials has been tried in man and experimental animals, no therapeutic agent has been found to be effective.[6] Thus finding of cryptosporidium in immunocompromised patients usually carries an ominous prognosis. Parenteral nutrition may be used to sustain the nutritional status of such patients, but this procedure has not been successful in sustaining most patients with HIV infection who had persistant diarrhoea due to cryptosporidial infection.

Although it has been found in other parts of the gastro-intestinal tract including the oesophagus, pharynx and common bile duct, the jejunum is the most heavily infected area in all cases that have been published[2]. Cryptosporidium does not penetrate the intestinal mucosa and characteristically the endogenous stages are found adhering to the microvillus border of the enterocytes in both small and large intestines[7]. Intestinal biopsy specimens from infected animals have shown extensive mucosal damage, and similar changes have been observed in biopsies from children with acute and chronic diarrhoea. It is not clear whether damage to the mucosa is mechanical, mediated by destruction of cells by liberation of parasite metabolites and toxins, or whether it is a hypersensitivity reaction of the mucosa to parasite antigens. The presumed mechanism of diarrhoea is malabsorption secondary to

mucosal damage. The histological picture of intestinal cryptosporidiosis is non specific[2]. Mild to moderate villous atrophy and increased crypt size have been described. Mild to moderate mononuclear cell infiltration of lamina propria is noted in some.

The principal mode of transmission of cryptosporidium is undoubtedly faeco-oral since oocysts are found almost exclusively in faeces. Clustering of cases in day-care centres and among family members is a common occurrence and suggests that cryptosporidia are at least moderately contagious and that person to person transmission may play an important part in the spread of infection. Many patients excrete oocysts even when they become asymptomatic and should be regarded as infective until oocyst shedding ceases. In a study carried out on children with diarrhoea a majority shed oocysts for ten days after cessation of diarrhoea[8]. An important feature which distinguishes cryptosporidium from most other coccidia is lack of host specificity which has been demonstrated by cross tranmission experiments[6]. Thus infected animals serve as potential sources of infection. A massive water-borne outbreak of diarrhoea due to cryptosporidum has been reported in Texas when 27% of residents had an acute gatro-intestinal illness[9]. Thus the possibility of indirect spread by water cannot be excluded especially since the infectivity of cryptosporidial oocysts is not affected by disinfectants.

The finding of cryptosporidium attached to mucosa of pharynx of a patient[2] raises the possibility that infection may be also transmitted through contact with oral secretions, although no one has reported oocysts in saliva. Respiratory cryptosporidiosis in birds is well documented and the possibility of air-borne transmission is difficult to discount.

Until recently diagnosis depended on the detection of the organism in specimens obtained by biopsy. Identification of cryptosporidium in stool samples was first accomplished in 1978.[2] A modified acid-fast stain is the currently accepted method for identifying oocysts in stools.[10] Yeasts are the most likely organisms in stools to be confused with cryptos-poridium, and acid-fast stains are especially helpful because they stain most yeasts blue or green and cryptosporidium red. Stool specimens suspected of containing oocysts can be preserved in 10% formalin for subsquent examination[10]. Concentration of oocysts can be performed by using Sheather's sugar cover-slip floatation method[11].

A promising serologic method for diagnosing cryptosporidiosis by the use of an indirect immunofluorescence test has been reported from the United States[12]. The test has good specificity and sensitivity even for patients with depressed cellular immunity although it failed to detect antibodies in patients with hypogammaglobulinaemia. Although it can be used to estimate the prevalence of cryptosporidiosis in different populations, more patients should be studied to evaluate the usefulness of the test in diagnosis.

The importance of cryptosporidium as an Intestinal pathogen for both immunocompromised and immunocompetent persons is becoming increasingly apparent. The Incidence of cryptosporidium varies in different countries and is higher in the developing world. A study carried out in a paediatric unit in Sri Lanka has shown that 6% of acute diarrhoeas in children are associated with cryptosporidial infection[5]. In an ongoing study, cryptosporidium is the most common parasite seen in stools of children with diarrhoea (unpublished observations). These findings and other reports suggest that it may be an unrecognised cause of self-limiting gastro-intestinal illness in immunocompetent subjects which does not require antimicrobial therapy. Moreover, a study carried out in South India[13] has indicated that treatment with antibiotics prolongs the duration of diarrhoea in patients with cryptosporidiosis. Therefore it is recommended that because of the relatively simple diagnostic procedure and the importance of cryptosporidium as an intestinal pathogen in man, it should be included with enteric pathogens routinely sought out for in patients with diarrhoea.

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SLMA Oration

Role of planned parenthood for enrichment of the quality of life in Sri Lanka

Siva Chinnatamby

Ceylon Medical Journal, 1990, **35**, 136–142

Introduction

Today, no problem is more urgent to the well–being of mankind than fertility regulation. The population problem is a global one. Unless something happens to change the present trends of population growth, at the end of the twentieth century the world population would have doubled bringing it to more than seven billion. The less developed nations are growing two or three times as fast as industrialized nations.

The only way of avoiding a depressing prospect is through planned parenthood. The ultimate objective of fertility regulation should not be to restrict life but to enrich it.

Interestingly, women pioneers are responsible for the planned parenthood movement in the world. To quote the names of a few — Marie Stopes in the United Kingdom, Margaret Sanger of the USA, Otterson Jensen of Sweden, Lady Rama Rau, and Avabai Wadia of India, Madame Goh Ke Kee of Singapore, Madame Kato of Japan and Sylvia Fernando of Sri Lanka.

The planned parenthood movement in Ceylon

The planned parenthood movement in Sri Lanka stemmed mainly from the concern for the health of women and children of large families in the face of high maternal and infant mortality.

The year 1953 could be reckoned as a milestone in the history of planned parenthood in Sri Lanka. Margaret Sanger, visited Sri Lanka in 1952 with Dorothy Bush and Dr. Abraham Stone. The outcome of their visit was the formation of the Family Planning Association of Ceylon.

At that time planned parenthood was frowned upon by society, considered a sin by religion, immoral by parents, and seldom, if ever, discussed by married couples or their family.

The Family Planning Association was inaugurated at the residence of the pioneer of the movement in Ceylon, Ms. Sylvia Fernando. Prof. C.C. de Silva, Dr. P.K. Thiagarajah, Dr. L.O. Abeyratne, Dr. Ram Aluvihare and Ms. Ezelyn Deraniyagala were some of the pioneers who attended the meeting. The first family planning clinic was opened in the De Soysa Hospital for Women, on 2 September 1953. The clinic session on Wednesday afternoons was held with the consent of the obstetrician in charge, Dr. P. D. Rajaratnam. At the first session alone, 32 mothers attended. The clinic was called "Mothers' Welfare Clinic" in order to emphasize that family planning did not mean, "no babies', but that its main objective was "every child is a wanted child". The first infertility clinic was started at the same session so that the aims of the Family Planning Associatien were put into practice. In view of the climate of society at that time, the mass media assisted reluctantly to popuarise this movement.

Women came with friends and neighbours and entered the clinic by the side entrance lest they were identified by others near the main gate. In the clinic they were received by volunteers in a friendly atmosphere which was a pleasant surprise to them. Neither husbands nor mothers accompanied them. The main plea of those seeking advice was that their visits should not to be revealed to anyone. Our work made very slow progress. There were two doctors in charge namely, Dr. Ram Aluvihare and myself.

I soon realised how many of the moribund mothers brought from the suburbs due to complications of multiparity could have been saved. One woman was 26th para and 33 years married. She had acute inversion of the uterus, mismanaged by an untrained midwife. She had not menstruated for 33 years because she started a pregnancy within three months of the previous one. This is probably a record, I was convinced that my services should be utilised to prevent unnecessary deaths by

multiparity and its complications. Hence a request from the Family Planning Association to assist in the clinic was readily accepted by me. I joined the Family Planning Association on condition that I was given the opportunity to assist childless couples also.

Review of the movement

When I review the planned parenthood movement in Sri Lanka I am struck by the remarkable revolution in the acceptance of this concept. The first ten years of the movement which was initiated in 1953, could be looked upon as a "period of struggle" against the prevailing customs, traditions and superstitions.

The only artificial methods of fertility regulation practised during this period were vaginal barriers, chemical spermicides and male condoms. The women came in numbers, learnt the technique of vaginal methods easily, but the continuation rate was less than 5% in one year even among educated women. The men did not like the use of condoms because they felt deprived of the pleasure of the sex act or because they could not get rid of the condom after use in privacy.

In the light of the poor continuation rate we decided to send trained home visitors to find out how best to advise the couple and to ascertain reasons for discontinuation. But at the sight of these workers at a distance, the doors were banged shut and windows were slammed because the mother-in-law was in the house. The women requested us not to send the health educators to their homes.

The year 1959 could be looked upon as one of great change in the concept of fertility regulation. I attended the IPPF International Conference in New Delhi. A paper on oral hormonal contaceptives was presented by Dr. Gregory Pincus of the Worcester Foundation for Reproductive Biology in Boston, Massachusetts. Dr. Pincus working with Dr. John Rock, a gynaecologist, had proved that progestogens given to female rabbits inhibited ovulation and 100% efficacy was established in this context. Based on these findings he had conducted pilot projects in Puerto Rico and Haiti among women of low socio-economic level and established that the pill was nearly 100% effective as a method of fertility regulation. As it was a simple method entailing the use of oral hormonal progestogens unrelated to the time of sex union, it was readily acceptable to the woman. It was a major breakthrough in fertility regulation.

After this lecture I requested Dr. Pincus to assist me to start a trial of the oral progestogen in Sri Lanka especially as our activities in this field had almost come to a standstill. He readily agreed and invited me to come to the Worcester Foundation and also visit Pureto Rico and Haiti as his guest. I spent three months in Dr. Pincus's unit in Boston. Having visited the centres I became convinced that the 'pill' was the answer to our women of lower socio-enconomic background.

Sri Lanka became the first centre in Asia to use the pill. Lest this event is interpreted as an example of Western scientists using women of developing countries as guinea pigs, I must emphasize that the pill was introduced to Sri Lanka at my request.

The pilot project on the pill

The use of the pill for fertility control commenced in 1961 at the clinic of the De Soysa Hospital for Women under my personal supervision. Individual instructions on its use were given to each user by the nurse, house surgeon and myself. Leaflets were distributed to potential users and charts were displayed indicating the details of the regimen of taking it. Days of menstruation marked by a stroke and days of sex union by the letter 'S' ensured that the correct procedure was followed. One woman who was moderately literate had marked 'S' every day including even the days of menstruation and the social workers who interviewed her were convinced that she did not understand the significance of the letter 'S', but when questioned closely by me she revealed that they had sex union every day and the pill saved her from having babies every year.

Side effects ilke nausea, vomiting, headache and giddiness were a problem; they were not mentiond in the instruction sheets. Therefore it was a common occurrence for us to be disturbed in the middle of the night by telephone calls by a distraught husband shouting to say that his wife was vomiting daily, and lethargic. Therefore it became clear that the instructions on the use of the pill had to be modified and that the possibility of certain side effects had to be mentioned.

Another significant constraint to the use of the pill was the attitude of the mass media; always looking for sensational situations, they reproduced the possible adverse side effects mentioned in the foreign press and gave adverse publicity to the pill. Several letters to editors of the newspapers condemned the use of the hormonal contraceptives implying that these may lead to cancer and cardiovascular accidents, causing much apprehension among users and spouses.

The pilot project proceeded at a disappointingly slow pace. Many acceptors were reluctant to use the pill regularly due to the fear of adverse side effects highlighted in the mass media. I realised that the time had come to take a dramatic step. I invited Dr. Pincus to visit Sri Lanka and assist me in the trial. The visit of Dr. and Mrs. Pincus in 1962 made a a great impact on the trial. Dr. Pincus delivered several lectures to scientific organisations and private groups and gave interviews to the press; happily, the mass media gave prominence to his visit and his interviews.

The pilot project included 1118 women using it for two years. The average age of the users was 28.2 years. A significant finding was that over 67% of the women were below 45 kg in weight. Sixty percent had never attended school and only 30% needed more extensive explanation as regards the pill regimen. The selection of cases was done with great care.

The pilot trial was carried out by a team including a social worker, midwife, nurse and house surgeon and the consultant. Every member of the team was given detailed instructions on the pill and was able to answer queries raised by the users. The potential users were interviewed individually by all members of the team to ensure that they understood the instructions. Every woman in the trial underwent routine pelvic examination, examination of breasts, recording of blood pressure and estimation of body weight.

In 1961 the facilities for pap smear examination were not avaiable in Sri Lanka. Dr. Pincus kindly made all arrangements for the slides to be examined at the Worcester Foundation in Massachusetts and the reports were available in three weeks.

The Sweden — Sri Lanka project

In 1958 the Government of Sri Lanka entered into a bilateral agreement with the Government of Sweden at the request of two women pioneers in the field of fertility regulation, namely Otterson Jensen of Sweden and Sylvia Fernando of Ceylon. The research team for the exercise consisted of a Swedish physician and a nurse who were sent to Ceylon by SIDA to conduct the pilot trial using chemical and mechanical methods to see whether Sri Lankans were 'planning minded' and to ascertain the best method to be advocated for fertility regulation. The trial was located in a typical village centre in Bandaragama, where the majority of the people were Buddhist. Another centre was in an estate area where services were offered mainly to Hindu women with poor literacy. While women in both centres accepted the need for planned parenthood they were not enthusiastic about the methods which were offered for this purpose.

The impressive report submitted by the Family Planning Association on the use of the pill as a contraceptive resulted in the pill being included subsequently in this trial. Though Sweden did not encourage the Swedish women in the use of the pill for fertility regulation SIDA introduced the oral contraceptive in the Ceylon Government programme. The estate women whose literacy was meagre used the method successfully; in fact in the village selected in the estate area the birth rate was reduced in two years by 10%.

Role of the government in fertility regulation

In August 1965 the Government of Sri Lanka accepted family planning as part of their policy and renewed the bilateral agreement with the Government of Sweden for a further period of three years.

In October 1968 the government took over direct responsibility of running the programme integrated with the existing Maternal and Child Health services, and the Family Planning Bureau was established under the direct administration of the Assistant Director MCH. In 1970 following the integration of Family Planning with MCH services, the Family Planning Bureau was renamed Maternal and Child Health Bureau. The concept of community health in developing a total health care system was another landmark in the history of the programme.

In 1971 the programme was expanded to encompass the wider concept of family health and the MCH Bureau was renamed Family Health Bureau in 1972. The programme aimed at co–ordinating a number of related health activities which have a direct bearing on the health of the family and community. These activities included, medical supervision of women and children, immunisation, nutrition, family planning, health education, environmental sanitation and school health.

Because of the extensive islandwide family planning programme the maternal death rate which was 2.4 per 1000 live births in 1965 dropped to 0.4 in 1984. This dramatic drop can be attributed to the prevention of multiparity and high risk pregnancies.

Other modern methods of contraception

The intra-uterine device

In 1964 the intra–uterine device (IUD) was introduced in Sri Lanka with the assistance of Prof. Clarence Gamble, a philanthropist and a Professor of Anatomy at Harvard University who believed in the simplicity of this method of fertility regulation. He was not popular in many countries where he tried to introduce simple methods like the sponge and jelly. We welcomed his offer of the IUD.

It was a much more difficult task to get volunteers for this trial. Home visitors were repulsed by irate husbands who considered a foreign body like the IUD inside the womb to be harmful. The trial took longer than expected and the side effects like menorrhagia, spontaneous expulsion, perforation of the uterus and transmigration of the device were troublesome.

The two year trial included 200 cases and the results were submitted to the Formulary Commitee which approved IUD as a method of fertility regulation. The IUD remains a popular method due to its simplicity, its use rbeing unrelated to the time of sex union its side effects being reduced, and its fairly high efficacy.

Long–acting injectables

The long acting progestogen medroxyprogesterone (Depo Provera) proved to be a popular method for fertility regulation in the trials conducted in Thailand. At the request of the manufacturer, I visited the centre and found the clinic and mobile services offering the method for hundreds of women to be popular. As the method did not involve a strict regime of a pill a day, and had even less side effects than the pill, it was acceptable to the population. I became convinced that the injectable, was worth a trial in Sri Lanka.

The two year trial was started in 1968. The trial included 200 women and the results were submitted to the Formulary Committee which approved medroxyprogesterone. It remains one of the most popular methods for fertility control in Sri Lanka today.

Norplant

The other long acting hormonal systemic contraception, namely, Norplant has only recently been approved by the Formulary Committee after a clincial trial in three centres sponsored by the Family Health International (FHI), conducted from 1985. The Sri Lanka Government is ready to introduce this agent in its programme; it is too early to comment on its acceptability. The clinical trials carried out so far have proved that the failure rate is very low, acceptability very high and the return of fertility is even much earlier than other homonal contraceptives. Side effects are almost the same as for the pill and extensive use will no doubt establish its acceptance.

Surgical methods

In Sri Lanka surgical methods of contraception, like tubectomy and vasectomy, took a long time to be popular, the main reason being that all these involved the use of general anaesthesia and a stay in the hospital.

In the early 1970s, at a meeting of the Medical Committee of the IPPF held in Bombay, Indian colleagues demonstrated innovative surgical techniques performed under local anaesthesia with no hospitalisation. Today vasectomy is a popular method performed with a single incision under local anaesthesia. This attracted many male volunteers and thousands of vasectomies were performed. The incentive scheme of the government contributed to the popularity. Tubectomy under local anaesthesia through a very small incision, with the aid of an elevator to lift the uterus was a novel idea devised in Bangkok. Gynaecologists from Bangkok visited Sri Lanka and introduced the technique which remains a popular method here.

The use of the laparoscope for tubectomy has also gained popularity. Its use for sterilization under local anaesthesia was started only in the 1980s. A Sri Lankan gynaecologist of the Family Health Bureau trained in the technique at Johns Hopkins Hospital has mastered the technique and he has to his credit over 50 000 tubectomies under local anaesthesia, taking only two or three minutes for each procedure. He has also done mobile services, visiting small institutions and has been responsible for its popularity. It is not an uncommon sight to see women who have undergone laparoscopic sterilization leaving for home in less than two hours after surgery by public transport. In Sri Lanka, of all women between 15 and 49 years, over 90% had heard of at least one modern method and nearly 50% are using one for contraception.

Non-contraceptive health benefits from oral contraceptive use

Epidemiologic studies in developed countries to ascertain health risks associated with oral contraceptive use since the introduction of the pill three decades ago, have shown substantial benefits from its use. However, in the understandable eagerness to protect presumably healthy women from some of the more serious health problems associated with the pill in these countries, its beneficial effects have often been ignored especially by the mass media. The most consistently demonstrated benefit of oral contraceptive use is the reduction among pill users of the incidence of benign breast diseases. Other such reductions include ovarian retention cysts, iron deficiency anaemia, pelvic inflammatory disease (first episodes), ectopic pregnancy, rheumatoid arthritis, endometrial cancer and ovarian cancer.

Factors contributing to the success of the planned parenthood movement in Sri Lanka

There were other factors that contributed to the succeseful planned parenthood movement in Sri Lanka.

1. A literacy rate of 85.5% in women between 15 and 49 years of age led to a better understranding of planned parenthood.
2. Education by health personnel, government and NGOs on planned parenthood has been responsible for overcoming traditions, customs and superstitions.
3. Education has made the women career minded and thus plan their families.
4. Government participation in the programme has made planned parenthood a part of family health activities.
5. The attitude of the religious leaders of society interested in the welfare of families has made the movement acceptable.
6. The increase in average age of marriage among women to 24 years has reduced the fertility rate.
7. Easy access and availability of all modern contraceptives has enhanced acceptance.

Role of international organisations

Sri Lanka became a member of the IPPF in 1954 and the IPPF takes full credit for promoting the movement here and giving every form of assistance. Strangely, the WHO did not approve planned parenthood until the early 1960s. This was mainly due to the fact that some of the member countries which disapproved fertility regulation once walked out when the topic was on the agenda for discussion. Sri Lanka takes the credit for introducing the topic as early as 1949 when the late Mr. S.W.R.D. Bandaranaike attended the Second World Health Assembly meeting in Rome as the Minister of Health. He referred to family planning as follows: "Another subject I should like to see some consideration of, is one on which we have been hitherto discreetly silent. There is a growing need for the consideration of the problem of birth control on an international plane. Do you realise that the very health work we are doing is making that problem increasingly urgent ?".

Today WHO has a separate department called 'Human Reproduction" which extends its services to all the countries of the world. Task forces in each method of family planning are conducting trials in the developed and developing countries to assess the efficacy and safety of the family planning methods. An expert committee called Scientific Technical Advisory Group (STAG) is responsible for the assessment of the findings of the task forces. I had the privilege of serving as a member of the STAG from 1985 to 1989. Problems of infertility receive equal attention from the WHO.

The United Nations agencies also have taken interest, and the UNFPA sent representatives in 1972 to be posted in Sri Lanka to assist the government in the problem of family health. Other agencies like the Population Council, Family Health International and OXFAM

have also helped to ccnduct trials and assist in the success of the programmes.

Subfertility

Early in the presentation I mentioned that I joined the FPA in 1953 on condition that I would have the opportunity to assist childless couples.

What was the reaction of the childless population to the idea of being investigated? Society in general felt that childlessness was solely due to a fault in the women. In my interviews with these women I emphasised the importance of getting the men to accompany them. Most of them said "He will never come". Some men indeed visited the clinic, and at the interview I explained the importance of investigation of both partners. At the mention of semen examination, many men never returned but the few who came, got themselves examined and treated where appropriate, and if successful, spread the news by word of mouth.

Sometimes explanation of the fertile period and the importance of sex union on the right day led to success. According to one woman, from the time of marriage for five years they had tried daily in vain. During the next five years they planned sex union once a week and finally in sheer desperation, once a month. Simple advice on the significance of the fertile days made them happy parents after 15 years of marriage. When this mother came to announce the news of success, she brought along three other childless women for investigation and promised to send more to make our movement a success.

In the early decades facilities for investigation of infertile couples were meagre. Modern sophisticated equipment for correct diagnosis did not exist. All that we could offer were seminal fluid examination, post–coital examination, insufflation of the tubes, hysterosalpingography and endometrial biopsy. Nevertheless the infertility clinic continued to function and nearly 30% of cases of infertility were successful after simple advice on ovulation days, improving of post-coital results by hormone therapy etc. It should be noted that today, with the use of routine laparoscopy and human assisted reproduction procedures the success rate is still under 60% even in the world's best centres.

Women with azoospermic husbands were offered artificial insemination of donor semen. This was frowned upon even though confidentiality and anonymity of the donor were assured. Today many couples, especially from the North and East of the country, despite the conditions prevailing there and the difficulties of travel, request for artificial insemination of donor semen.

I have managed cases of subfertility in the private sector and during the last seven years, achieved success in 106 instances. In the investigation and management of these cases, no sophisticated equipment was used simply because they are not available. Table 1 gives a breakdown of the abnormalities which were responsible for subfertility.

Table 1

Diagnosis	*Number of cases*
Tuboplasty	10
Oligozoospermia	30
Poor coital examination results	41
Artificial insemination of donor semen	16
Decortication of ovaries	3
Unicornuate uterus and transplantation of tube	1
Failed in vitro fertilisation	1
Artificial insemination of husband's semen	4
	106

This table shows that the highest success has been in cases with poor post-coital examination results, and illustrates the importance of post-coital examination. With one course of treatment 30% had a successful outcome, 40% needed a second course of treatment and 30% needed treatment of both partners. Tuboplasty was done in 10 women. Of these, five have had babies already and the sixth is expecting one. Tubal obstruction was diagnosed by hysterosalpingogram. In another woman a transplantation of the tube was done for unicornuate uterus where the second tube which was attached to a rudimentary horn was transplanted to the main uterus. Four months after the operation she became pregnant and had a normal delivery.

One interesting case was in a woman who had in vitro fertilisation done in the UK at great expense without any success. On her return to Sri Lanka oligozoospermia was treated. Artificial insemination of the husband's semen was successful in achieving pregnancy.

Thirty one cases of oligozoospermia (under one million) poor motility (less than 20%) were successfully treated, resulting in pregnancy in the partners.

Lastly, decortication of the ovaries was done in three women with Stein Leventhal syndrome and the women subsequently became pregnant.

The role of the family in determining the quality of life

This evening I have traced the evolution and expansion of the planned parenthood movement in Sri Lanka. I would like to conclude by referring to the quality of life in relation to the family.

The family holds a key position in the quality of life an individual eventually attains. Large families have been a way of life in almost all developing countries and consequently the quality of life in these countries is affected adversely. The large family not only taxes the material substance it earns but also often dilutes the emotional requisites of its members. The result is an impoverishment of both the physical and mental components required for a contented life. It has been pointed out that in developing countries large families exist in order to compensate for the wastage due to infant and child mortality.

The need for large families no longer exists in our country. What was needed was the spread of the message of planned parenthood throughout the island so that "every child born is a wanted child". With strong backing by the government, the planned parenthood movement has carried out the task with admirable efficacy and enthusiasm, thus contributing to the enrichment of the quality of life in Sri Lanka.

Childlessness, especially in Eastern countries is almost an unacceptable situation. Therefore no one would deny that the quality of life of a married couple would be enriched by their children. From the inception, the planned parenthood programme has been concerned with the problem of subfertility. Data have been presented this evening on the success achieved in this field in spite of the lack of sophisticated procedures for human assisted reproduction. Nothing could be more rewarding for someone involved in planned parenthood than the sight of a hitherto childless woman expecting her first child. Who will deny that the quality of life of the person who brought about this change is also enriched?

Acknowledgments

Many international and local scientists of repute have contributed to the success of planned parenthood programme in Sri Lanka: Dr. Gregory Pincus, Prof. Clarence Gamble, Dr. Allen Guttmacher, Dr. Helana Wright and Dr. Margaret Jackson, and locally Prof. N. D. W. Lionel, Prof. Daphne Attygalle, Prof. C. C. de Silva and lastly the grand-mother of the planned parenthood movement in Sri Lanka, Ms. Sylvia Fernando.

The International Planned Parenthood Federation deserves a big bonquet for all the assistance given to Sri Lanka to make the planned parenthood programme a success.

Case Report

Granulomatous mastitis — a well defined entity

M. P. Kumarasinghe[1] and L. R. Amarasekera[2]

Ceylon Medical Journal, 1990, **35**, 143–145

Introduction

Granulomatous mastitis, also known as chronic lobular mastitis or granulomatous lobulitis[1] commonly affects young parous females. They present with breast lumps which have to be differentiated from malignancies and other forms of mastitis. Microscopically distinct non–caseating granulomata are found in the breast. The exact aetiology is unknown but this well defined entity is different from other granulomatous conditions in the breast. The condition is known to respond well to steroids. Two cases are described.

Case report 1

A 38 year old mother of one child presented with a painful breast lump of 1½ months duration. On examination the lump was 5cm x 5cm, red, indurated and tender. Aspiration of the lump was done and the smear showed numerous cells, most being inflammatory and multinucleated giant cells. There were no malignant cells.

Frozen section biopsy showed a very cellular appearance with multinucleated giant cells, inflammatory cells and some large cells with abundant cytoplasm. There were no hyperchromatic nuclei, abnormal mitotic figures or malignant cells. However a lumpectomy was advised.

Paraffin sections of the lump stained with routine haematoxylin and eosin stain showed well defined granulomata consisting of many epithelioid cells, multinucleated giant cells and collections of polymorphs.

There was no necrosis, caseous or otherwise. Some granulomata coalesced. A few dilated ducts were also noted. Polymorphs were scattered in some areas and in collections in other areas. Stain for acid–fast bacilli and periodic acid shiff stain for fungi and gram stain for bacteria were negative (Fig 1).

A diagnosis of granulomatous mastitis was made. Subsequently the patient presented with another lump on the same breast at the same site, about 6 weeks after the first operation. She also had post operative infection at the site.

A lumpectomy was performed and stained paraffin sections again showed a similar histological appearance with some fibrosis. There was no evidence of malignancy.

Case report 2

A 28 year old mother presented with a breast lump. A part of the lump was received for histological analysis. No further history was available.

Paraffin sections stained with haematoxylin and eosin showed non–caseating granulomata clearly confined to breast lobules (Fig 1) consisting of many epithelioid cells, multinucleated giant cells (Fig 2), lymphocytes and polymo rphs. There was no necrosis. A few ducts were dilated and filled with polymorphs (Fig 2).

Stains for acid-fast bacilli, PAS stain for fungi and gram stain for bacteria were negative. A diagnosis of granulomatous mastitis was made.

Discussion

Granulomatous mastitis was described as a distinct entity by Kessler and Wolloch in 1972.[2] Until the 1970s this condition had gone unrecognised.

Commonly young parous females are affected and they present with breast lumps with or without pain. Clinically these could be mistaken for carcinoma and Kessler and Wolloch reported 2 cases in which pre operative cobalt therapy had been advocated. They may have axillary lymphadenopathy, further confusing the diagnosis.

All other forms of mastitis and granulomatous conditions can be excluded once prope histological sections stained with routine and appropriate special stains are examined.

The microscopic appearances are of non–caseating granulomata consisting of epithelioid

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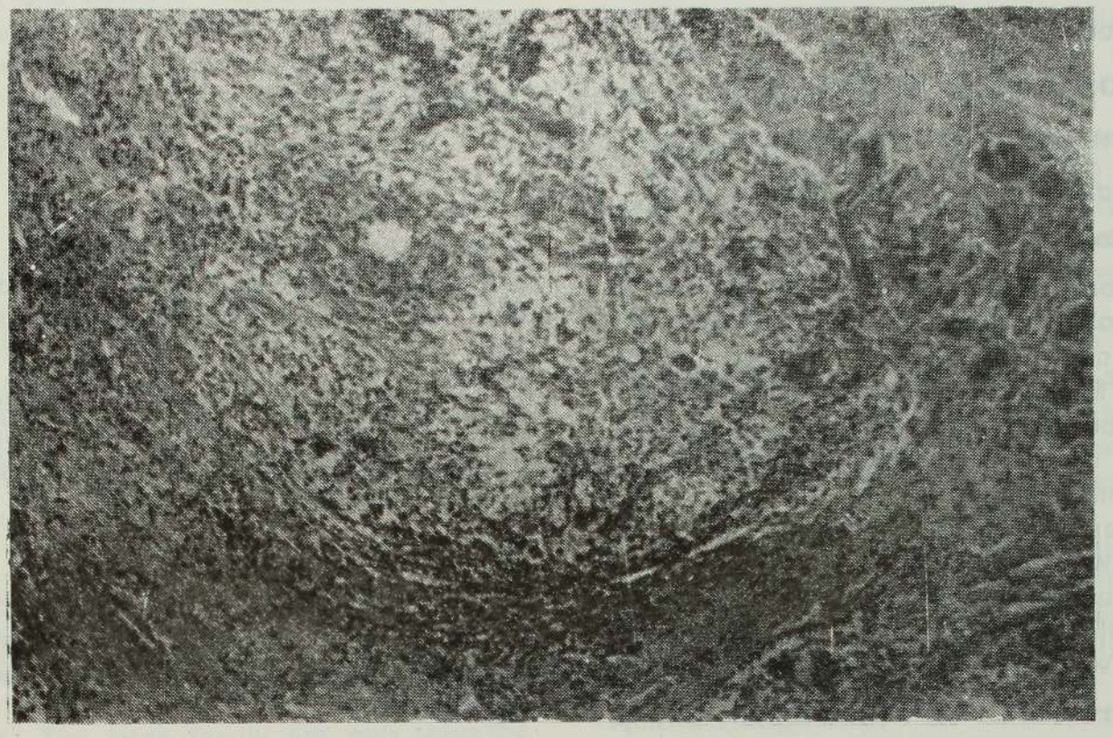

Fig. 1

A granuloma confined to a breast lobule x 10.

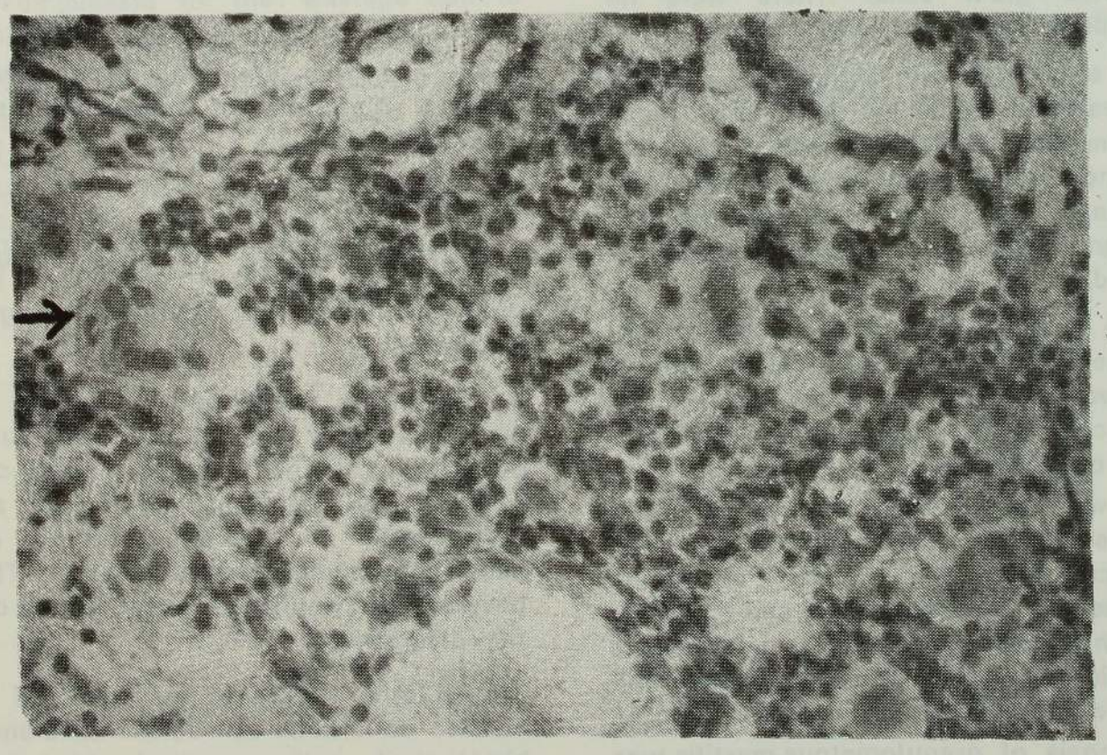

Fig. 2

High power view to show a multinucleated giant cell (arrowed).

cells, multinucleated giant cells with or without polymorphs. At times collections of polymorphs can form true micro-abscesses.[2,3] Usually the granulomata are confined to lobules[1] as in case 1 but they can coalesce (case 2). Classically there is no caseation although there may be areas of necrosis. Acid fast bacilli, fungi and bacteria are absent.

The aetiology is not well established. An immune mediated mechanism[2] and a link to other granulomatous conditions such as granulomatous orchitis and thyroiditis has been suggested. So far there has been no conclusive evidence to support this theory. Alternatively, damage to the ductular epithelium could cause leakage of secretions into the stroma and evoke an initial polymorph infiltration followed by a granulomatous reaction.[3]

The condition responds to steroids according to some reports,[2,3] although a higher incidence of post-operative infection is reported. In fact one of our patients developed wound infection.

It is important to be aware of this condition because it can mimic a malignancy clinically. However, a proper histological examination can rule out malignancy. It is also important to differentiate this condition from other granulomatous diseases, specially tuberculous mastitis.

Acknowledgements

We wish to thank Prof. A. H. Sheriffdeen for his assistance.

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Case Report

Dilemmas in the diagnosis and management of intracavernous aneurysm

J. B. Peiris[1], Padma S. Ranasinghe[2], S. B. Gunatilake[3] and B. Selladurai[4]

Ceylon Medical Journal, 1990, **35**, 146-147

Introduction

Patients with intracavernous aneurysms usually present with involvement of the cavernous sinus structures. Rupture of the intracavernous aneurysm leads to the development of a carotico–cavernous fistula.

Modern techniques and advances in treatment have contributed greatly to the diagnosis and management of this rare condition, in spite of which diagnosis and management can still be a dilemma.

We report two patients, one a dilemma in diagnosis and the other a dilemma in management.

Case report 1

A 59 year old woman presented in May 1987 with painless partial ptosis of her right eye. There was no involvement of the ocular movements or pupil. The other cranial nerves were normal. There was no muscle fatiguability, and the edrophonium test was negative. Treatment with neostigmine did not improve the eye signs. Since she did not have any other neurological signs she was regularly seen in the neurology clinic, without specific treatment.

She was readmitted in March 1989 with complete ptosis of the right eye, headache of two months' duration, painful ophthalmoplegia and a fixed dilated pupil in the right eye. There were 3, 4 and 6 (partial) cranial nerve palsies. Optic fundi were normal and the corneal reflex was intact.

Xrays of the skull were normal and right carotid angiography showed a vascular blush in the cavernous sinus area. Cranial computerized tomography (CT) showed a well defined parasellar hyperdense lesion with possible spotty calcification. The lesion enhanced well with contrast. Although CT favoured a meningioma, the angiogram suggested the possibility of an aneurysm. These require different surgical procedures. The definitive treatment for meningioma is removal of the tumour whereas that for an aneurysm is clipping *it* or ligation of the carotid artery.

Exploratory craniotomy showed a pulsatile aneurysmal mass arising from the carotid artery in the cavernous sinus. The aneurysm was not suitable for clipping and the craniotomy was closed with a view to subsequent carotid ligation.[1]

The cross compression study performed two days later to asses the collateral cerebral circulation showed satisfactory results permitting the ligation of right common carotid artery (CCA). The patient tolerated the ligation of the CCA and did not develop any neurological disability.

Case report 2

A 25 year old man attended our unit with diplopia on looking to the right for 3 months and a right lateral rectus palsy. Over the next two days he developed a painful total ophthalmoplegia with complete ptosis and a dilated pupil. This was accompanied by sensory impairment over first two divisions of right 5 nerve. Other cranial nerves including optic fundi were normal. Xray of the skull was normal. The right carotid angiogram showed a large carotid aneurysm of 2 cm diameter within the cavernous sinus.

Since the aneurysm was large, and unsuitable for clipping, it was decided to ligate the CCA. Cross compression studies were done to assess the circulation. Within 15 seconds of right CCA compression the patient developed changes of ischaemia in the right hemisphere such as weakness of left upper limb with high voltage slow wave activity in right parietal leads in the electroencephalogram (EEG) which precluded ligation. In this situation even embolic occlusion of the aneurysm would be hazardous without establishment of

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an adequate circulation in the carotid territory by an extracranial-intracranial (EC–IC) anastomosis, for which the patient went abroad to a special centre[2,3].

He underwent an EC–IC by pass surgery followed by balloon occlusion of the aneurysm and the right internal carotid artery (ICA). The angiogram and magnetic resonance imaging after the surgery showed the occluded right ICA and the aneurysm.

Discussion

Our first patient had undiagnosed unilateral isolated partial ptosis without pupillary involvement for one year. In clinical practice an isolated long standing unilateral partial ptosis is likely to be due to myasthenia gravis or Horner's syndrome rather than a compressive lesion of the 3 cranial nerve. One and a half years later this patient showed the features of an acute compression of the 3 cranial nerve and this emphasizes the fact that when the diagnosis of the ptosis is in doubt, extensive investigations are mandatory.

The cranial CT of this patient showed a mass in the cavernous sinus with marginal calcification suggestive of an aneurysm.

A meningioma of this region is slightly hyperdense on a plain scan and shows homogenous enhancement with contrast. There may also be oedema of adjacent brain tissue and hyperostosis of adjacent bones. In both aneurysm and meningioma, a hypodense area in the centre may be seen in the CT scan, due to thrombus in the former and tumour necrosis in the latter. In doubtful situations of this nature digital subtraction angiography may sometimes help differentiation.

The best treatment for an intracranial aneurysm is a direct surgical approach with clipping of its neck and preservation of the parent vessel. But giant intracavernous aneurysms present a major problem because of the problems associated with their direct surgical approach. When the aneurysm is not clippable, the preferred treatment for the intracavernous aneurysm is the ligation of the CCA or the ICA which reduces the pressure and flow distal to the ligation, promoting thrombosis of the aneurysm. Thromboembolic complications are less with CCA occlusion than with ICA occlusion[1].

Although we were faced with difficulties in coming to a definite diagnosis in this patient with available investigations, there were no difficulties in the treatment. She tolerated the right CCA ligation well although the EEG after 24 h showed bilateral slow wave activity suggesting bilateral ischaemia caused by the steal phenomenon. This slow wave activity disappeared in 2 weeks.

In contrast the diagnosis of the intracavernous aneurysm of the second patient was easily made from the right carotid angiogram. But failure of good flow on compression of the ipsilateral carotid made the management difficult with the resources available to us. The patient showed no significant improvement of the neurological deficit 6 months after the EC–IC by pass and balloon catheter embolisation.

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Case Report

Tuberous sclerosis presenting as an intraventricular tumour

Saman B. Gunatilake[1], P. S. Ranasinghe[2], J. B. Peiris[3] and B. M. Selladurai[4]

Ceylon Medical Journal, 1990, **35**, 148–150

Summary

We report a case of tuberous sclerosis in an 8 year old girl presenting for the first time with features of raised intracranial pressure due to a large intraventricular tumour. Occurrence of these tumours in children with tuberous sclerosis justifies cranial computerised tomography as a screening procedure to detect these tumours early.

Introduction

Tuberous sclerosis (TS) is, after neurofibromatosis, the second commonest of the neurocutaneous disorders. In contrast to the high incidence of brain tumours in patients with neurofibromatosis, intracranial tumours are seldom seen in patients with tuberous sclerosis[1]. Progressively enlarging intracranial mass lesions occur in about 10% of patients with tuberous sclerosis. We report here of a 8 year old girl who presented with symptoms of raised intracranial pressure due to an intraventricular tumour, but did not have any symptoms of TS previously. This is the first such case reported from Sri Lanka.

Case report

An 8 year old girl was admitted to hospital because of persistent headache and vomiting for about one month. There was no history of episodes of loss of consciousness or seizure activity. Her birth history was uneventful. Development had been normal without any delay in milestones. There was no family history of seizure disorder or neurological disease. Parents and the siblings are in good health.

On examination the child had a normal intelligence for her age. There was a patch of alopecia over the vertex of the skull (Fig. 1). Three hypopigmented macules were noted over the neck, abdomen and right thigh. No other skin abnormality was found. Cardiac, respiratory and abdominal examination was normal. Neurological examination showed bilateral papilloedema with normal visual acuity and visual fields. Other cranial nerves were normal. There were no pyramidal or cerebellar signs.

Fig. 1

Patch of alopecia over vertex.

Skull Xray showed two small areas of intracranial calcification and suture diastasis. The electroencephalogram showed diffuse bilateral delta wave activity compatible with raised intracranial pressure. A computerised tomographic scan showed a large intraventricular tumour arising from the region of foramen of Monro, and dilated lateral ventricles caused by obstruction to cerebrospinal fluid flow. There was a small area of calcification within the tumour and another in the left cerebral hemisphere (Fig. 2). Ultrasound examination of the abdomen did not show any hamartomas in the kidneys and the liver. Echocardiography showed no abnormal masses in the heart.

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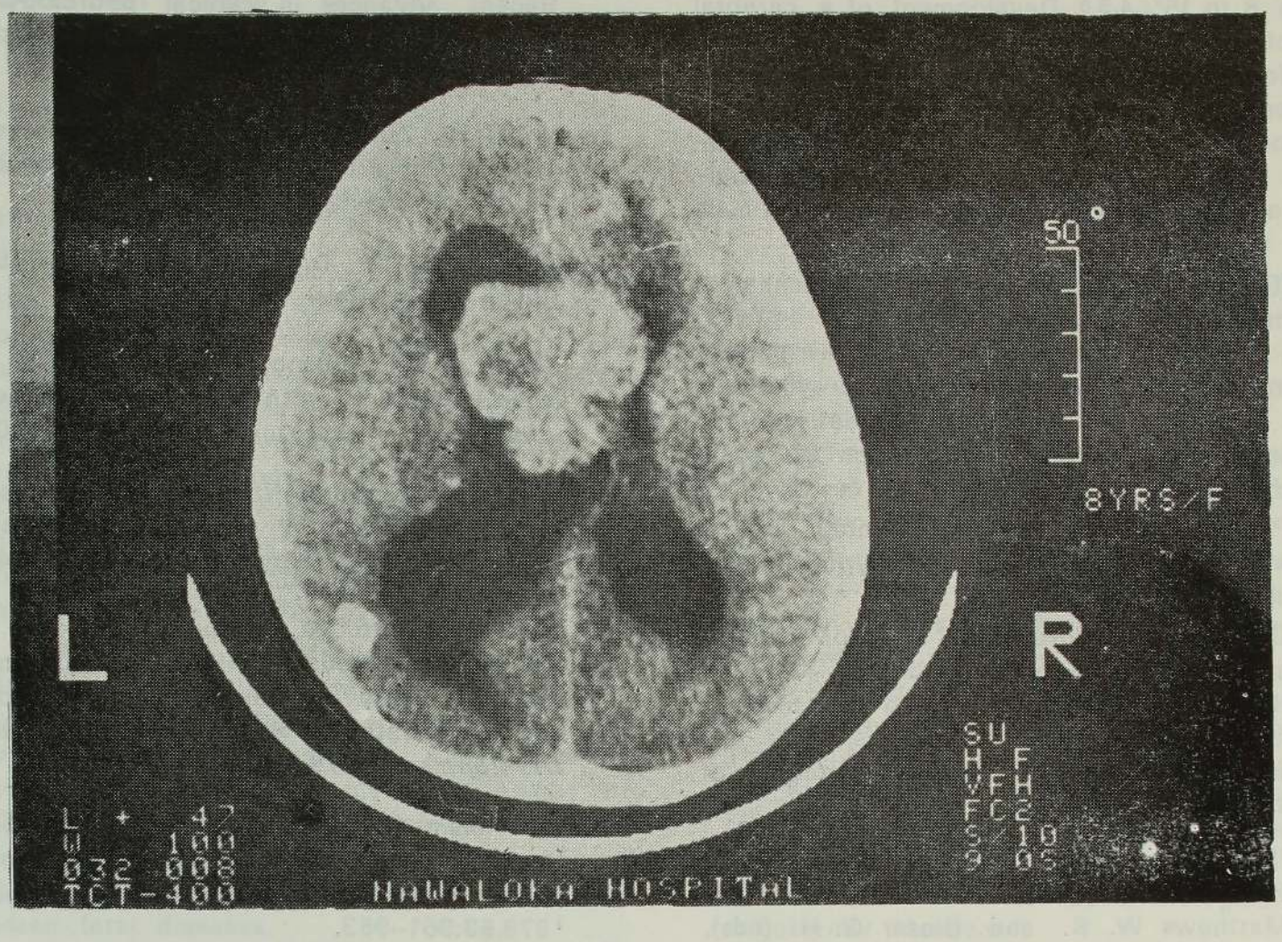

Fig. 2
CT Scan showing tumour, dilated ventricles and calcification.

She was treated with high dose dexamethasone and referred for surgery. At surgery a large vascular tumour was found in the ventricular cavity and partial removal of the tumour was achieved. Histological examination of the tumour showed it to be an ependymoma.

Discussion

The triad of seizures, mental deficiency and adenoma sebaceum[2] establishes the diagnosis of TS, but it misses large subgroups of cases in whom the entire triad is not present. It is now clear that TS may occur in formes frustes in which one or more components of the triad are absent. Gomez[3] listed primary and secondary diagnostic criteria and the presence of any one of the following primary criteria is accepted as diagnostic: 1. pathologic confirmation of cortical tuber or subependymal hamartoma. 2. multiple retinal hamartomas. 3. adenoma sebaceum or ungual fibromas.

Presence of two or more of the following secondary criteria also is said to be diagnostic even in the absence of primary criteria: 1. infantile spasms. 2. hypomelanotic macules. 3. Shagreen patch. 4. single retinal hamartoma. 5. subependymal or cortical calcification on CT scan. 6. multiple renal tumours. 7. cardiac rhabdomyoma. 8. sibling, parent or child with TS.

Adenoma sebaceum usually does not make its appearance until later in childhood and is therefore not useful for the clinical diagnosis in the early years. In infants presenting with seizures detection of hypomelanotic macules may point to the diagnosis. The abnormal findings in our patient were the hypomelanotic macules, the patch of alopecia and the cerebral tumour and cortical calcification on the CT scan. Presence of two of the secondary criteria enabled us to establish the diagnosis of TS.

Progressively enlarging intracranial mass lesions are distinct from cortical tubers and subependymal glial nodules which are developmental defects that do not enlarge once brain growth is completed. Most of these present in childhood and the incidence has ranged

from 8 to 15%.[4,5,6] Development of a cerebral neoplasm should always be strongly suspected if focal neurological signs or evidence of raised intracranial pressure appear. Almost all tumours are located in the region of the foramen of Monro and have a distinct histological appearance with multinucleated giant cells and a high degree of vascularity.

This is the first report from Sri Lanka of a case of intraventricular tumour in TS. This case is also unusual in that the patient did not have any of the commoner symptoms such as seizures and mental retardation. Our patient had a patch of alopecia on the scalp which has been described earlier in TS.

Poliosis, a patch of depigmented hair is known to occur when the hypomelanotic macules occur on the scalp[7].

Computed tomography is a major advance in the study of the brain lesions in TS. The radiologic appearance on CT scan is distinctive. Early detection of cerebral neoplasm by this method would facilitate complete removal of the tumour.

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Occasional Review

Tumour necrosis factor

D. G. Harendra de Silva[1]

Ceylon Medical Journal, 1990, **35**, 151–153

Introduction

Cytokines are soluble proteins produced by the immune system in response to a variety of stimuli. These substances could be considered as hormones, because of their effects on different tissues *via* the circulation distal to the site of production. Interferon and interleukins are better known examples of cytokines. These endogenous mediators, which have been evolved for protection, when expressed in an unrestrained manner may cause harmful effects on the host.

During the last decade, tumour necrosis factor (TNF), has become the most prominent of these proteins because of its varied effects, both beneficial and harmful. Recent research on this mediator has given an insight into the pathogenesis of some diseases which have intrigued physicians for years. It has also indicated better avenues of treatment for these often fatal diseases.

History of the discovery of TNF

Nearly a hundred years ago William B. Coley, an American surgeon[1], treated cancer patients by intravenously injecting broths of live bacteria (later killed organisms), which caused necrosis of tumours in some patients. However, because of unpredictable results and toxicity, this treatment was abandoned. Since then, very little research on this aspect of cancer therapy was carried out, because of the availability of antimitotics and radiotherapy until in 1936, the active substance lipopolysaccharide (LPS) in gram-negative bacteria was identified[2]. This is also known as endotoxin.

In 1962 O'Malley[3] showed that serum derived from mice with endotoxic shock, caused necrosis of a 'transplantable' tumour in other mice. Carswell in 1975[4], identified this substance capable of causing striking damage to tumours, and called it tumour necrosis factor.

Rouzer and Cerami[5] were intrigued by the severe cachexia, amounting to the loss of more than half the body weight in rabbits infected with a few grams of trypanosomes. A 'competitive' mechanism could not explain the extensive consumption of protein and lipid mass by the small load of parasites. They found that this was associated with a clearing defect of triglycerides due to inhibition of lipoprotein lipase activity, leading to triglyceridaemia. They also showed that this effect was due to a factor produced in the host, and that it was transferable to another uninfected animal by injecting serum. These effects were reproducible *in vitro* in adipocyte tissue cultures by endotoxin activated macrophages. The main source of this factor were the macrophages, and due to its profound effects in causing cachexia it was called 'cachectin'. Further work by this group showed that cachectin and TNF were both biologically and structurally identical[6].

Effects of TNF

When administered in large quantities, TNF and LPS produce a shock–like state similar to endotoxic shock, while in smaller doses over prolonged periods it causes anorexia and cachexia similar to that seen in chronic infection and malignancy. Administration of LPS as a large bolus, induces TNF release in about 20 minutes, reaching a peak in 90 to 120 minutes, and becoming undetectable in 5 to 6 hours. The TNF could produce the clinical and pathological changes seen in septicaemic states such as hypotension, hyperglycaemia followed by hypoglycaemia, haemorrhagic infarction of the gastrointestinal tract, adrenal and pancreatic haemorrhage, acute tubular necrosis[7], glomerular damage[8], and interstitial pneumonitis. It is estimated that the toxicity of TNF is 100 000 fold that of cyanide on a molar basis[6]. The lethal effects of LPS can be reduced by the administration of cyclooxygenase inhibitors, and its production is inhibited by corticosteroids[6]. Passive immunisation using monoclonal antibodies to TNF, when given 2 hours before administration of

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LPS, protects animals from lethal effects[7]. Recent studies have shown a protective effect of anti–TNF antibodies in humans in septic shock[9].

Some of the effects of TNF include increased adhesion of polymorphs to endothelial cells, increased phagocytic activity, degranulation of polymorphs and increased superoxide and H_2O_2 formation. It also alters endothelial cells, by increasing its adhesiveness and procoagulant activity, and decreased expression of thrombomodulin. TNF also stimulates interleukin 1 (Il_1) production which in turn stimulates polymorphs and also initiates coagulation[6]. These factors are responsible for the features of disseminated intravascular coagulation (DIC) often seen in septicaemic states. Thrombocytopaenia is probably secondary to coagulation.

Role of TNF in septicaemia

TNF is significantly increased in association with a poor prognosis in meningococcal septicaemia[10], and in septicaemic children[11], suggesting that it may be the mediator in the pathogenesis. Animal studies have shown that TNF causes leukostasis in the pulmonary vasculature, which is associated with respiratory failure[7]. Recently, the association of increased TNF in bronchial lavage fluid in patients with adult respiratory distress syndrome (ARDS) has been demonstrated[12]. The pathological features in animals together with this observation suggest a role for TNF in causing ARDS which is associated with septicaemia.

Possible role of TNF in the pathogenesis of haemolytic syndrome following shigellosis

Preliminary studies by us (unpublished), have shown an increase in TNF levels during the acute phase of shigellosis compared to convalescence. The presence of DIC, endotoxaemia, bacteraemia and haemolytic uraemic syndrome in shigellosis, supports the hypothesis that TNF may be involved in the pathogenesis.

TNF in malaria

It is now established that the pathological changes seen in cerebral malaria are due to TNF and other cytokine mediators. It is thought that some parasite product acts functionally like LPS[13]. These mediators are responsible for the intra–erythrocytic degeneration of parasites and host pathology.

Malignancy and TNF

'Coley's toxins'[1] were probably responsible for the release of TNF which in turn caused haemorrhagic necrosis of some tumours. This effect could be either secondary to intravascular coagulation in the vessels supplying the tumour or due to direct cytotoxic activity or both. TNF also activates macrophages to destroy cancer cells more effectively[14]. Studies are now in progress to determine the effectivenss of intravenous and local administration of TNF to tumours. It is also known that some tumours are able to secrete TNF to produce severe cachexia as seen in chronic inflammatory states[14]. TNF also causes decreased production and reduced life span of red cells leading to anaemia, and may be the factor responsible for anaemia of chronic inflammation and malignancy. Interleukin 2 is now used widely in the treatment of malignancies. This cytokine is also capable of activating macrophages, stimulating production of TNF and Il_1[15].

Role of cytokines in the pathogenesis of Kawasaki disease

Kawasaki disease is a recently described illness, associated with lymphadenopathy, mucocutaneous changes, and coronary artery thrombosis. It is now thought that the coronary artery lesions are due to endothelial damage mediated by Il_1 and TNF, secreted in response to an unknown stimulus[16].

Protective effects of TNF

The stimulatory effects of TNF on leucocytes play a beneficial role in the inflammatory response, although it may be harmful in other circumstances such as in DIC. Although TNF is known to be associated with the complication of cerebral malaria; it is thought to provide a protective role as well[13]. TNF allows neutrophils to kill candida *in vitro*[6]. It is also reported to play a protective role in listeriosis, and trachoma, usually when present in small quantities. TNF is capable of activating eosinophils to kill schistosomula, and has anti-viral effects *in vitro*.[6]

Role of other cytokines

TNF is only a part of a network of several interacting mediators. Other mediators such as Il_1 release may be stimulated by TNF, which could also produce similar changes, while interferon alpha increases TNF production. Il_2

is capable of stimulating TNF and Il_1 release. There are probably secondary mediators such as platelet activating factor and prostaglandins, which are activated by the cytokines to produce the final effects[6].

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Letters to the Editor

Intravenous frusemide and intramuscular reserpine — inexpensive regime for the treatment of severe hypertension

Ceylon Medical Journal, 1990, **35**, 154–155

Sir,

Newer antihypertensive agents such as intravenous labetalol, sodium nitroprusside and diazoxide that have been introduced for the treatment of hypertensive emergencies, are costly and are not readily available in most hospitals in Sri Lanka. Furthermore, the administration of these drugs should ideally be carried out in an intensive care unit. We investigated the value of two cheap antihypertensive agents freely available in most hospitals of Sri Lanka.

Twelve consecutive patients with severe hypertension (defined as a blood pressure of 210/130 mm Hg or over after an hour's bed rest) were selected for the study. None of the patients were on any antihypertensive agents for a period of at least one week before the study. The first six patients were administered frusemide 80 mg intravenously and the rest were given reserpine 1 mg intramuscularly. The blood pressure was recorded by one of us in the right forearm with a standard sphygmomanometer. Readings were taken at 0 hours, half an hour, one hour and six hours.

The results are shown in Table 1.

In the group treated with frusemide the mean systolic blood pressure fell from 222mm Hg to 166 mm Hg, and the mean diastolic blood pressure from 143 mm Hg to 105 mm Hg. In those treated with reserpine the mean systolic blood pressure fell from 212 mm Hg to 151 mm Hg and the mean diastolic blood pressure from 135 mm Hg to 100 mm Hg.

Intravenous frusemide and intramuscular reserpine have been used extensively in the treatment of severe hypertension before the advent of the newer antihypertensive agents. In all our patients we were able to achieve a gradual and uniform fall in blood pressure without any untoward effects. The critical blood flow at which cerebral autoregulation is compromised is around 25% of the mean arterial pressure, and a reduction to about 45% of the original pressure would produce symptoms of cerebral ischaemia[1]. In our patients the fall in mean arterial pressure was 26% with frusemide and 25% with reserpine.

Table I

Blood pressure in mmHg before and after administration of frusemide

	0 hr.	*6 hr.*
	234/142	182/102
	210/150	140/94
	222/132	160/98
	210/130	176/108
	240/170	200/120
	220/136	142/108
Mean	222/143	166/105

Blood pressure in mmHg before and after administration of reserpine

	0 hr.	*6 hr.*
	210/130	132/90
	216/132	154/92
	220/150	170/100
	212/132	156/110
	210/134	154/98
	204/132	140/110
Mean	212/135	151/100

Serious side effects due to rapid reduction of blood pressure following the use of newer antihypertensives have been described[2]. To prevent these side effects, their administration has to be closely monitored in an intensive care unit. We were able to acheive satisfactory results with the minimum of facilities in a general medical ward without recourse to additional manpower or expenditure. For instance, a 1 mg vial of reserpine costs

only Rs 15.85 whereas a 100 mg vial of labetalol costs Rs 148.72 (retail prices quoted by the State Pharmaceuticals Corporation). We suggest that intravenous frusemide and intramuscular reserpine could be used safely for the management of severe hypertension.

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An unusual mis-identification

Sir,

Capgras syndrome and Fregoli's illusion have been well described in the psychiatric literature. Our case report deals with a form of mis-identification of delusional nature in a previously diagnosed schizophrenic patient.

A 49 year old married woman Mrs G, brought a young woman to the Psychiatric Unit claiming that the latter was her daughter. She said that her daughter (Miss A), who also had two previous admissions in 1986 and was diagnosed as a schizophrenic, had run away from home. She found her on the street after a period of nine months. The so-called Miss A, however, was another known chronic schizophrenic (and not Miss A) who had previously been in our ward and known to the ward staff. They traced her records as 29 year old Mrs L. Although Mrs G occasionally thought that the woman she thought was her daughter did not quite resemble Miss A, she (Mrs G) readily admitted that this was due to her long absence from home and the consequent physical neglect. Mrs L was dishevelled and withdrawn on admission. She made a rapid recovery with electroconvulsive therapy, phenothiazines and nursing care. She claimed to be Mrs L and said that Mrs G was not her mother. She gave her own home address which was the same as that on the records. However, Mrs G persisted in saying that it was her daughter, attributed the denial to the 'madness' on the part of her daughter, and took her home on discharge.

Mrs G was first admitted to our unit in 1977 and a diagnosis of acute schizophrenia had been made. She claimed she was well since her discharge and did not take follow-up medication for more than a few months in 1977. She had been treated with phenothiazines in 1986, while she was her daughter's bystander in 1986. She claimed to be off all psychotropic drugs and did not have any signs or symptoms of any psychiatric illness at present except the mis-identification of Mrs L as her daughter.

We present this problem as an unusual case of delusional mis-identification in a previously diagnosed psychiatric patient, who appears to be otherwise normal at present. We are unaware of reports of this nature appearing in the standard psychiatric texts or literature.

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Point of View

Building bridges between doctors and patients

Jack C. S. Ling and Paul Barefield

The health-for-all goals require that remedies be found for the deficiencies in communication that exist between the medical profession and the lay public.

Ceylon Medical Journal, 1990, **35**, 156-157

The general public of today, influenced by the vast changes that have occurred in information technology, seek to expand their knowledge of scientific and technological matters connected with everyday life. Yet the scientific-technological community is ill-equipped to respond to this demand. Some scientists, it is true, are excellent communicators and effective disseminators of information, but the overwhelming majority are not, and indeed are unaware that the need exists. Nowhere is this deficiency greater than in the field of health and medicine.

Open dialogue

Patients do not find it easy to describe symptoms, and for doctors the interpretation of what their clients tell them is no easy task. Misunderstandings can arise even where there is an open dialogue between doctors and patients. If doctors adopt an authoritarian manner and expect their patients to act submissively, communication becomes difficult and the danger of misunderstanding greatly increases.

Once a diagnosis has been made, the doctor must persuade the patient to comply with medical decisions; this is more of an art than a science. Account has to be taken of other factors affecting the patient who, at the least, is influenced by family members, peers and the mass media. Medical advice is only one of many influences, and the clinician has to understand what is involved.

Medicine has increased its ability to predict the effectiveness of interventions. It is now possible to inform patients more accurately about illnesses and treatment options, and to give them an increased say in medical decisions by which they are affected. Another significant factor justifying a greater flow of information to patients is their readiness to learn more about their own health and medical conditions.

Negative influences

Doctors have been traditionally reluctant to communicate with the general public through the mass media. The time-honoured taboo against doctors advertising their services has prevented them from communicating with the public on health issues of general significance.

Most doctors in public health services in fact have an intellectual commitment to the wide dissemination of information. Yet few can adjust themselves to promoting health in collaboration with people in other sectors. There is a gap between intellectual acceptance and actual responses to situations. Worse still, those who talk loudest about the need to involve people in health often do not realize that they are not practising what they preach. However, many doctors now recognize that health is a social phenomenon, requiring multisectoral support; and it has now been accepted that health behaviour is influenced by cultural, informational, social, economic and environmental factors, as well as by biological and medical ones. The public must above all else be adequately informed about matters pertaining to health.

Jack Ling was Director of Public Information and Education for Health, World Health Organization, 1211 Geneva 27, Switzerland, from 1982 to 1986. He recently joined the Faculty of the School of Public Health and Tropical Medicine, Tulane University, New Orleans, LA 70112-2699, USA. Paul Barefield is Professor of Communication at the University of Southwestern Louisana, P. O. B. 43650, Lafayette, LA 70504-3650, USA. *Reprinted from World Health Forum, Vol. 10, 1989.*

Health for all

Progress towards health for all requires support from the sectors of education, communication, agriculture and industry. For such support to be possible, the health sector must be able and willing to relate to non-medical groups. But until they learn to communicate with the public, the health professions will not be able to collaborate successfully with people in other sectors.

In science curricula there is rarely any commitment to the dissemination of knowledge. New scientific information is first published in specialized journals. Publication elsewhere would invite peer hostility and condemnation. Journalists working in the popular media often find doors shut in their faces when they try to seek out new science stories. Yet if research is financed by public funds, the public surely have a right to know about it. If research is intended to benefit the public, why should scientists be so reluctant to discuss it with other people?

Clearly, in order to remove the barrier between scientists and the lay public the training of scientists should cover communication and intercultural relationships. There is also a need to educate the public about their attitude towards health care providers. Health education should aim to give people, especially children, a better understanding of their own health and their responsibility for maintaining it, an ability to talk freely with doctors and other health professionals, and a sound preparation for handling inconsistent items of information about health.

The notion of exclusive authority held by most doctors has been encouraged by meekness among patients. If providers of vital services are treated like demigods they almost inevitably become convinced that they possess superhuman powers.

Good communication is a two-way street: doctors and patients should enlighten each other.

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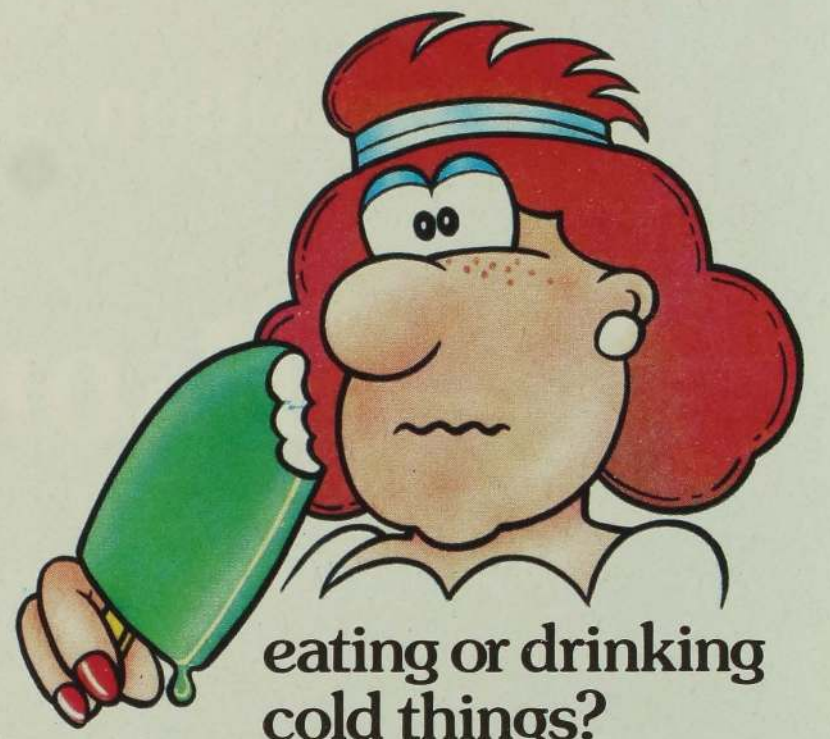

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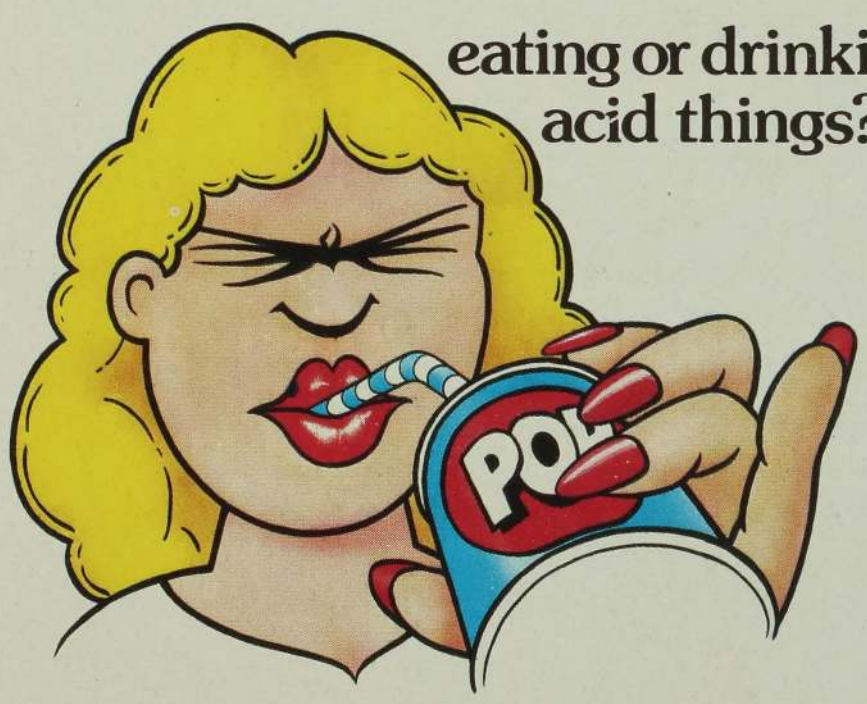

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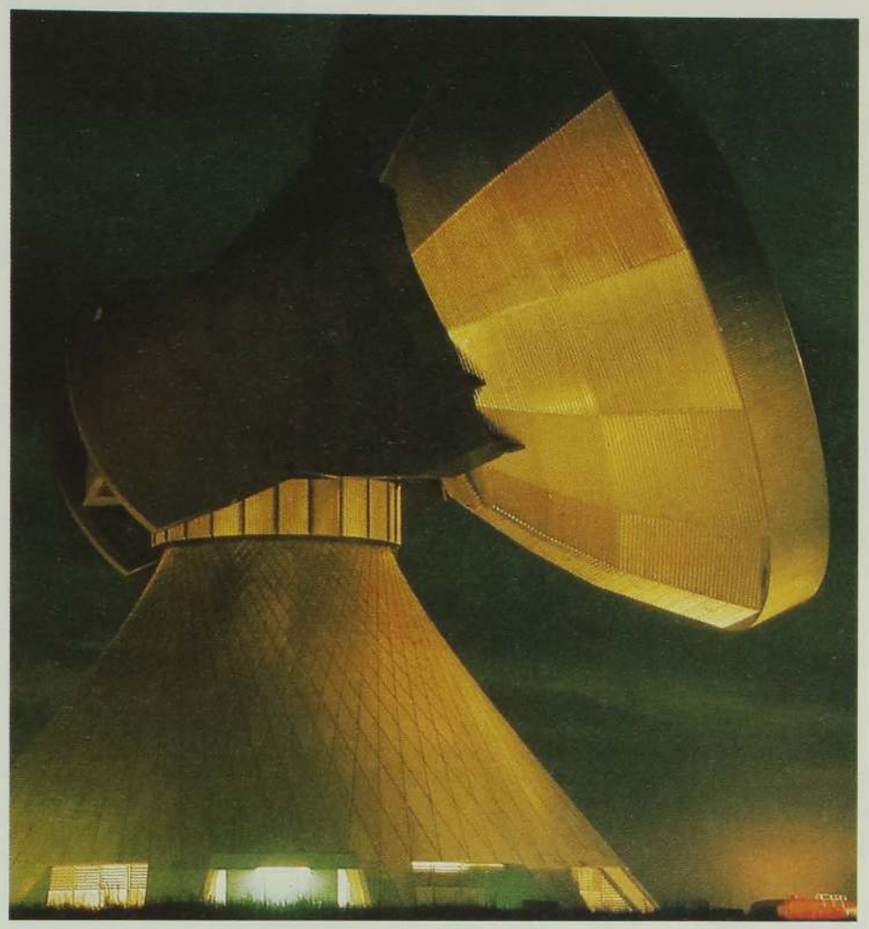

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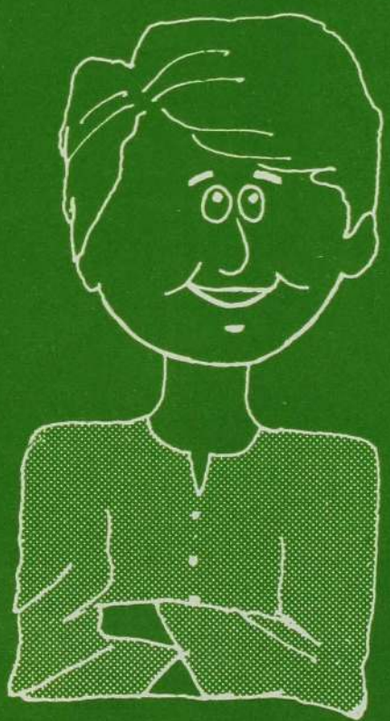

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Pharma Division, A. Baur & Co. Ltd.
P. O. Box 11, Colombo.

INFLAMED AND INFECTED DERMATOSES

• **Eczema** • **Inflammatory mycosis**
• **Superficial pyoderma** • **Diaper dermatitis**
• **Paronychia**

With Pevisone®

Econazole Nitrate 1%, Triamcinolone Acetonide 0,1%

cream

you prescribe:

- ▶ Excellent therapeutic results
- ▶ Vehicles which support the therapeutic effect
- ▶ Fast elimination of the subjective symptoms
- ▶ Control of the pathological process within a short time
- ▶ Enhanced antimicrobial effect of econazole nitrate due to triamcinolone acetonide
- ▶ Elimination and prevention of secondary infections
- ▶ Good tolerance even on sensitive skin
- ▶ Security: ● Free of antibiotics
  - ● No resistance developing
  - ● Free of sensitizing substances

IMAGES et METHODES S.A.

Cilag **CILAG AG PRODUCTS**
CH-6300 Zug Switzerland
Further information available on request from
Pharma Division, A. Baur & Co. Ltd.
P. O. Box 11, Colombo.

Micropore™ - Surgical Tape

NEW! DISPENSER PACK

- **KEEPS THE TAPE CLEANER LONGER**
- **MAKES YOUR JOB EASIER**
- **ENCOURAGES USAGE OF COMPLETE ROLL**

IT'S THE SAME GREAT TAPE

You're probably already familiar with **MICROPORE**™ Tape: it's the number one selling brand of surgical tape in the world. Its hypoallergenic adhesive virtually eliminates the skin irritation, itching and maceration often associated with ordinary plaster tapes. **MICROPORE**™ Tape's uniquely airy construction keeps your patients' skin cool and comfortable . . . and it removes virtually painlessly without leaving an adhesive residue.

MICROPORE* is a registered trademark of 3M

3M

Authorised distributor:

LANKA MEDICAL (IMPORTS) LTD

5th Floor, 27-5/1 York Arcade Bldg.,
P.O. Box 1998, York Arcade Road , Colombo 1, SRI LANKA
Telephone: 548699, 547749 Telex: 21517 MEDICA CE

Sugar-free
Sweetened with Sorbitol

Multi -

Sanosvit

with Iron

Multi-Vitamin + Calcium + Iron

SYRUP

A palatable, Sugar-Free syrup especially useful for:

Diabetic patients

Pregnant women

Lactating mothers

Composition

10 ml contain :

Vitamin A palmitate	2,400 I.U.
Vitamin D_3	200 I.U.
Vitamin B_1 chloride hydrochloride	2 mg
Vitamin B_2-5' phospate sodium	2 mg
Vitamin B_6 hydrochloride	1 mg
Vitamin C	100 mg
Vitamin E acetate	2 mg
Nicotinamide	10 mg
Panthenol	4 mg
Calcium glucona	50 mg
Calcium phospholactate (equivalent to calcium 35 mg, prim. calcium phosphate 2 mg)	50 mg
Iron (II) gluconate equivalent to 10 mg iron)	86.356 mg

Presentation

Bottle 285 g syrup — Rs. 159/85

Suppliers:

Byk Gulden

West Germany.

Indications

To promote hematopoiesis (formation of blood cells). To prevent loss of appetite susceptibility to infection as well as disturbance of child development and growth.

To avert exhaustion and poor concentration at school. To prevent vitamin and iron deficiency in all age groups and, in women, during pregnancy and lactation. To promote well-being during convalescence.

Dosage and Mode of Application

School-children, adolescents and adults take 2 teaspoonfuls and children aged 1-5 years take 1-2 teaspoonfuls twice a day before meals.

Importers:

Farnell Ceylon Ltd.

129/1, Sri Saranankara Road,
Dehiwela

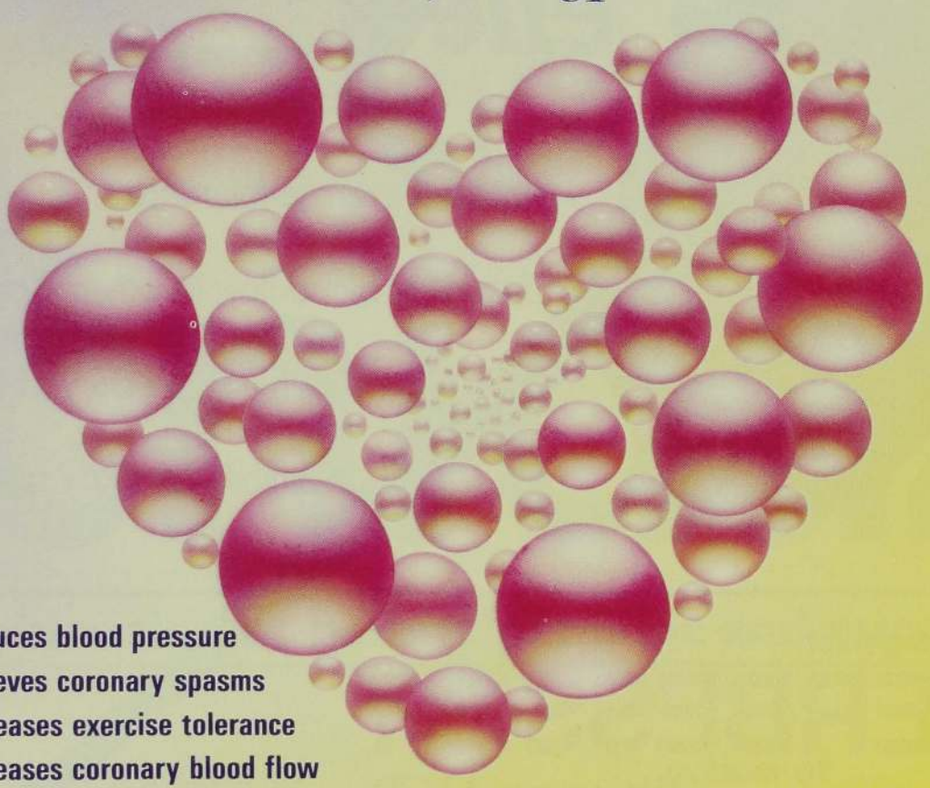
with cardioprotective effect

Ca++-antagonist

HERBESSER® 60

(diltiazem HCl)

First Choice for Hypertension



- **Reduces blood pressure**
- **Relieves coronary spasms**
- **Increases exercise tolerance**
- **Increases coronary blood flow**
- **Shows little or no effect on glucose, electrolytes, cholesterol, and uric acid in the blood**

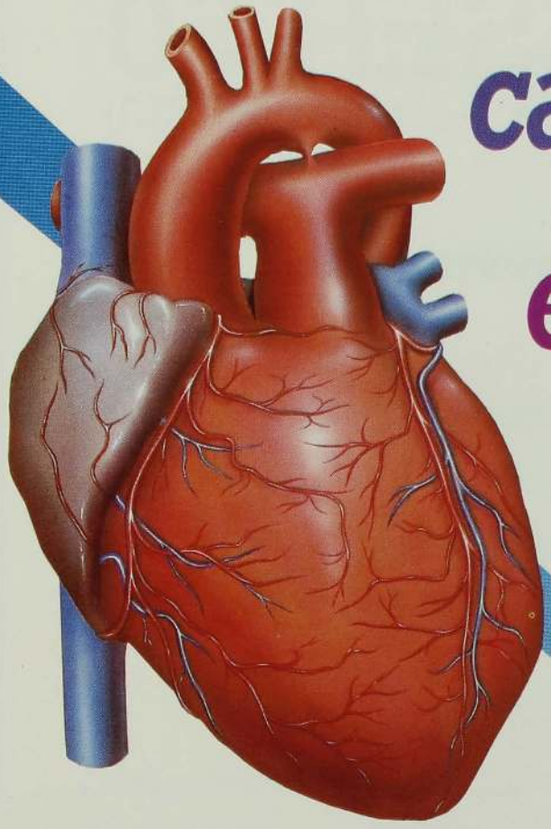
INDICATIONS & DOSAGE: Essential hypertension (mild to moderate): 180mg a day. The dosage may be adjusted according to the severity of symptoms. PRECAUTIONS: ❶ Since it is described in case-reports that symptoms were aggravated after sudden withdrawal of calcium-antagonists medication, reduce the dose gradually and observe the symptoms carefully if HERBESSER 60 is to be withdrawn. Give patients precaution not to discontinue HERBESSER 60 medication without physician's directions. ❷ HERBESSER 60 is contraindicated to the following patients: ① Patients having atrioventricular block 2nd or 3rd degree or sinoatrial block. ② Pregnant women and women suspected of being pregnant. ❸ HERBESSER 60 is to be carefully administered to the following patients: Patients with severe bradycardia (below 50 beats/min) or 1st degree atrioventricular block. ❹ Adverse reactions: ① Cardiovascular system: Dizziness, bradycardia, flush, A-V block may infrequently, and palpitation may rarely occur. In such cases, the dose should be reduced or the administration should be discontinued. ② Psychoneurologic system: Lassitude, headache and heaviness of head may infrequently, and weakness may rarely occur. ③ Liver: Jaundice and hepatomegaly may rarely occur. The drug should be withdrawn in such cases. GOT and GPT may be elevated infrequently. ④ Hypersensitivity: Hypersensitive symptoms such as eruption (infrequently) and multiform erythematous eruption (rarely) may occur. In such cases, administration should be discontinued. ⑤ Gastrointestinal system: Stomach discomfort, constipation, abdominal pain, heart burn and anorexia may infrequently occur. Soft stool, nausea, diarrhea and thirst may rarely occur. ❺ Administration to pregnant women and nursing mothers. ① Since animal experiments have proved teratogenic and feticidal effects of diltiazem hydrochloride, HERBESSER 60 is contraindicated to pregnant women and women suspected of being pregnant. ② It is not recommended to administer HERBESSER 60 to nursing mothers since it is reported diltiazem hydrochloride is excreted in human milk. If administration is necessitated, nursing should be avoided. (Please read package insert carefully for further information)

Further information is available on request.

HEMAS (DRUGS) LIMITED.
Hemas Building, 36, Bristol Street, P.O. Box 911,
Colombo 1, Sri Lanka Telephone: 22307, 22308.

MANUFACTURED BY
TANABE SEIYAKU CO., LTD.
2-10, Dosho-machi 3-chome, Chuo-ku, Osaka, Japan.

An antianginal agent with a cardioprotective effect



- Increases exercise tolerance
- Increases blood flow to ischemic myocardium
- Reduces blood pressure and cardiac load
- Inhibits coronary spasm

Ca++-antagonist

HERBESSER®

(diltiazem HCl)

INDICATIONS & DOSAGE: • Relief of anginal pain due to effort angina and myocardial infarction (90mg a day) • Essential hypertension (mild to moderate) (90-180mg a day). The dosage may be adjusted according to the severity of symptoms. PRECAUTIONS: ❶ Since it is described in case-reports that symptoms were aggravated after sudden withdrawal of calcium-antagonists medication, reduce the dose gradually and observe the symptoms carefully if HERBESSER is to be withdrawn. Give patients precaution not to discontinue HERBESSER medication without physician's directions. ❷ HERBESSER is contraindicated to the following patients: ① Patients having atrioventricular block 2nd or 3rd degree or sinoatrial block. ② Pregnant women and women suspected of being pregnant. ❸ HERBESSER is to be carefully administered to the following patients: Patients with severe bradycardia (below 50 beats/min) or 1st degree atrioventricular block. ❹ Adverse reactions: ① Cardiovascular system: Dizziness, bradycardia, flush, A-V block may infrequently, and palpitation may rarely occur. In such cases, the dose should be reduced or the administration should be discontinued. ② Psychoneurologic system: Lassitude, headache and heaviness of head may infrequently, and weakness may rarely occur. ③ Liver: Jaundice and hepatomegaly may rarely occur. The drug should be withdrawn in such cases. GOT and GPT may be elevated infrequently. ④ Hypersensitivity: Hypersensitive symptoms such as eruption (infrequently) and multiform erythematous eruption (rarely) may occur. In such cases, administration should be discontinued. ⑤ Gastrointestinal system: Stomach discomfort, constipation, abdominal pain, heart burn and anorexia may infrequently occur. Soft stool, nausea, diarrhea and thirst may rarely occur. ❺ Administration to pregnant women and nursing mothers. ① Since animal experiments have proved teratogenic and feticidal effects of diltiazem hydrochloride, HERBESSER is contraindicated to pregnant women and women suspected of being pregnant. ② It is not recommended to administer HERBESSER to nursing mothers since it is reported diltiazem hydrochloride is excreted in human milk. If administration is necessitated, nursing should be avoided. (Please read package insert carefully for further information)

Further information is available on request.

HEMAS (DRUGS) LIMITED.
Hemas Building, 36, Bristol Street, P.O. Box 911,
Colombo 1, Sri Lanka. Telephone: 22307, 22308.

MANUFACTURED BY
TANABE SEIYAKU CO., LTD.
2-10, Dosho-machi 3-chome, Chuo-ku, Osaka, Japan

acne deserves professional attention

Pathogenesis

- increased sebum production
- formation of a keratin plug
- development of bacteria

NEW

Acnidazil

TRADEMARK

a combination of benzoylperoxide and miconazole

action of benzoylperoxide

- reduces sebum production
- keratolysis-comedolysis
- the follicles open up

action of miconazole

- antibacterial
- miconazole penetrates into the deeper skinlayers and is active against *Propionibacterium acnes*

Janssen Pharmaceutica
B - 2340 Beerse Belgium

Some practical guidelines for the use of Acnidazil

★ During the first week apply the cream once daily (in the evening) and from the second week onwards twice daily (morning and evening).

★ Rub cream gently in affected skin areas until it has completely disappeared.

★ Continue treatment until all symptoms have disappeared (usually after 4 - 8 weeks).
N.B. Usually improvement can be clearly seen after 1 - 2 weeks of treatment.

In patients with a great susceptibility to acne, repeat treatment 2 - 3 times weekly after disappearance of the symptoms to consolidate the improvement.

★ Should there still be complaints about irritation, light redness or scaling of the skin, then the treatment need not be discontinued immediately. The dosage may then be lowered temporarily. Complaints usually disappear spontaneously after two weeks of treatment.

★ Acnidazil may fade coloured clothes.

Acnidazil
JANSSEN

because acne deserves professional attention

Prescribing information

composition

Acnidazil is a combination of miconazole nitrate (R 14 889) and benzoyl peroxide.

properties
Both miconazole nitrate and benzoyl peroxide suppress the growth of *Propionibacterium acnes* and *Staphylococcus aureus in vitro*. Benzoyl peroxide has keratolytic and drying properties and reduces the concentration of irritating free fatty acids in the sebum. Both clinical and *in vitro*-studies have proven a synergistic effect of the two components.

indications
Acnidazil is indicated for the treatment of acne vulgaris.

dosage and administration
A thin layer of cream should be applied to the affected areas once daily (evening) during the first week and twice daily (morning and evening) thereafter. Washing the face with mild soap and lukewarm water prior to application enhances the efficacy of the medication. The cream can be rubbed in gently with the fingertips.
Treatment should be continued till symptoms have disappeared (normally between 4 and 8 weeks). Then, especially in patients younger than 18 years of age, it is advisable to maintain the improvement with less frequent applications (2-3 times a week). If necessary the treatment with **Acnidazil** may be supplemented with dietary measures and antibiotics.

precautions
For external use only. **Acnidazil** should not be brought into contact with the eyes and mucous membranes. The product may bleach dyed clothing and fabrics.

side-effects
Occasionally mild irritation and/or moderate reddening may appear, especially at the beginning of the treatment.
True contact allergy to the benzoyl peroxide component is rarely encountered.

contra-indications
Hypersensitivity to any of the ingredients.

formula
Miconazoli nitras 20 mg, benzoylperoxydum 50 mg pro 1 g.

Full Prescribing information is available on request

Sole Agents :

Pettah Pharmacy Ltd.,
23, Dam Street,
Colombo 12.
Phone : 31213, 31214,

Janssen Promotional Division
1041, Maradana Road,
Colombo 8.
Phone : 599461

TO GROW FROM AN ACORN TO AN OAK.....
.....FOR THE SERVICE OF THE PEOPLE

IT TOOK A QUARTET OF ENTREPRENEURS IN THE PHARMACEUTICAL TRADE. IT TOOK COURAGE, VISION AND A DREAM WAS LAUNCHED.

LIKE THE SAPLING OF AN OAK. A SMALL BEGINNING WITH BROAD OBJECTIVES. A DEDICATION TO SERVE THE SICK AND NEEDY. WE ARE WORKING TOWARDS A GOAL THAT THE MEDICAL PROFESSION WILL REMEMBER US, BECAUSE WE WISH TO ENSURE THAT GOOD HEALTH CAN BE RENEWED OR MAINTAINED AT A REALISTIC COST.

FOR OURSELVES, WE DO NOT WANT TO GROW GIGANTIC AS AN OAK. MERELY TO LEAVE "FOOTPRINTS ON THE SANDS OF TIME....."

WE WANT TO BE ABLE TO SAY OUR GROWTH STEMMED FROM THE FAITH WE INSPIRED IN PEOPLE, FROM THE TRUST GAINED FROM THE MEDICAL PROFESSION, FROM A HEALTHY NATION WE CONTRIBUTED TO.

WE WANT TO BE ABLE TO STAND UP AND SAY "WE HAVE SERVED HUMANITY....."

TO KNOW THAT WE HAVE HELPED IN OUR OWN WAY TO IMPROVE THE QUALITY OF LIFE OF OUR NATION. TO KNOW WE HELPED NURTURE LIFE'S PRICELESS GIFT "GOOD HEALTH" AND PLACED IT WITHIN THE REACH OF ALL...

OUR DEDICATION IS TO REDUCE THE COST OF MEDICATION THROUGH BETTER MEDICAL CARE.

THORN GROUP (PVT) LTD.

FORCEVAL®

22 VITAMINS AND MINERALS

NO GLUTEN - NO PRESERVATIVES - NO SUGAR

ONE-A-DAY

ADULTS

A Complete ONCE DAILY Supplement in Vitamin and Mineral Deficiency States

FORCEVAL®

22 VITAMINS AND MINERALS

ONE-A-DAY

ADULTS

EACH CAPSULE CONTAINS

Vitamin A	5000 i.u. (1500 mcg. Retinol)
Vitamin D2	600 i.u. (15 mcg. Calciferol)
Vitamin B1	10 mg.
Vitamin B2	5 mg.
Vitamin B6	0.5 mg.
Vitamin B12	2 mcg.
Vitamin C	50 mg.
Vitamin E	10 mg.
Nicotinamide	20 mg.
Calcium	70 mg.
Calcium Pantother	2 mg.
L-Lysine	60 mg.
Inositol	60 mg.
Choline Bitartrate	40 mg.
Iron	10 mg.
Copper	0.5 mg.
Phosphorus	55 mg.
Magnesium	2 mg.
Potassium	3 mg.
Zinc	0.5 mg.
Iodine	0.1 mg.
Manganese	0.5 mg.

RECOMMENDED DOSAGE

One Capsule DAILY

WHEN PHYSICAL AND MENTAL STRESSES AND STRAINS ARE COMPOUNDED WITH AN INADEQUATE DAILY DIET.

FORCEVAL CAPSULES for Adults are a Scientifically formulated supplement of unexcelled quality, containing 22 VITAMINS & MINERALS per capsule, ESSENTIAL for the Generation and Repair of every single living cell in the Body.

FORCEVAL CAPSULES are indispensable for the DAILY maintenance of Optimum Health, and by correcting deficiency states, they assist the Body's natural defence mechanisms to deter, fight and control the on-going onslaught of the invading micro-organisms of infectious diseases.

℗ PA/142/3/1 MADE IN ENGLAND

UNIGREG LTD., SURREY, ENGLAND.

SOLE AGENTS IN SRI LANKA
BURHANI PHARMACEUTICALS
PHONE: 431857

Nutroferol Plus

REG: TRADE MARK

PALATABLE PROPHYLACTIC/ THERAPEUTIC FORMULATION SUPPLYING

* Essential iron - to boost or replace depleted iron stores
* Vitamin B Complex and B 12 - because nutritional deficiencies are usually multiple.

WELL TOLERATED BY ALL AGE GROUPS

Nutroferol Plus provides iron as ferrous gluconate, which is better absorbed.... better utilized ....better tolerated than most other forms of iron.

* Nausea,abdominal cramps, constipation and diarrhoea are rare with Nutroferol Plus
* Palatable,orange -flavoured formulation encourages compliance

EXCELLENT HEMATOPOIETIC RESPONSE

* Response to Nutroferol Plus is usually prompt and predictable - symptoms such as fatigue and weakness generally subside as hematopoiesis improves
* Ideal for long term therapy Treatment with iron should be continued for four to six months and even longer in the face of recurrent bleeding.

A product from

Winthrop

Pharmaceuticals of merit for the physician.

Seton®

CONSUMER PRODUCT RANGE

Tubigrip
Tubular support bandage, providing even support for strains and soft tissue injuries.
Available in natural and flesh.

Tubifast
Tubular conforming bandage to hold dressings in place or as a dressing to cover ointment and creams.

Other products available in the range:–

- Collafoam
- Cotton Gloves
- Fembrace
- Vertebrace

Lumbar Abdominal Support
Adjustable Tubigrip Abdominal support with Velcro fastening.

Arthro-pad
Tubigrip with foam interlining, to provide support and warmth to knees and elbows.

S.S.B.'s
Tubular bandage shaped like a stocking for easy application and giving graduated compression over the limb.
Available in natural and flesh.

CA
Colombo Agencies Limited
300–304, Galle Road, Colombo 3.
Tel:573551/2

Parkinson's disease early recognition...

About one in every 600 people aged over fifty suffers from Parkinson's disease. It is one of the most common neurological diseases. Diagnosis is based exclusively on clinical symptoms.

...optimum treatment

Primary treatment of Parkinson's disease

Composition
‹Madopar› '62.5': Capsules with 50 mg levodopa and 12.5 mg benserazide.
‹Madopar› '125': Capsules with 100 mg levodopa and 25 mg benserazide.
‹Madopar› '250': Capsules with 200 mg levodopa and 50 mg benserazide.
‹Madopar› '250': Cross-scored tablets with 200 mg levodopa and 50 mg benserazide.

Madopa '250' Cross-scored tablets with 200 mg levodopa and 50 mg benseazide

Indications
Parkinson's disease. Symptomatic (postencephalitic, arteriosclerotic, toxic) parkinsonism, except drug-induced parkinsonian syndromes.

Contraindications
The same contraindications as for sympathomimetics such as epinephrine, norepinephrine and their derivatives. Severely decompensated endocrine, renal, hepatic and cardiac disorders; psychoses and severe psychoneuroses. ‹Madopar› should not be given to patients under 25 years of age, or to pregnant women; should a woman taking ‹Madopar› become pregnant, she should immediately discontinue treatment.

‹Madopar› is a Trade Mark.

Side effects
Psychic disturbances, dyskinesia; more rarely cardiovascular and gastrointestinal disturbances.

For further information, please refer to the package insert or *The ‹Roche› Vademecum*.

ROCHE

Roche Pharmaceuticals & Chemicals Ltd. P.O. Box 98593, Tsim Sha Tsui Post Office Hong Kong.

Further information available on request from Pharma Division, A. Baur & Co. Ltd. P. O. Box 11, Colon

‹Bactrim› Roche
Trimethoprim and Sulfamethoxazol

Pediatric syrup with a unique flavour chosen by children

Better acceptance by children
- *simple to take*
- *improves compliance*
- *has a direct bearing on therapeutic success*

Bactrim *is available with a wide range of formulations*

ROCHE *Full details on composition, indications, contraindications, side effects, dosage and precautions are available on request.*

Roche Pharmaceuticals & Chemicals Ltd.
P.O. Box 98593, Tsim Sha Tsui Post Office
Hong Kong.

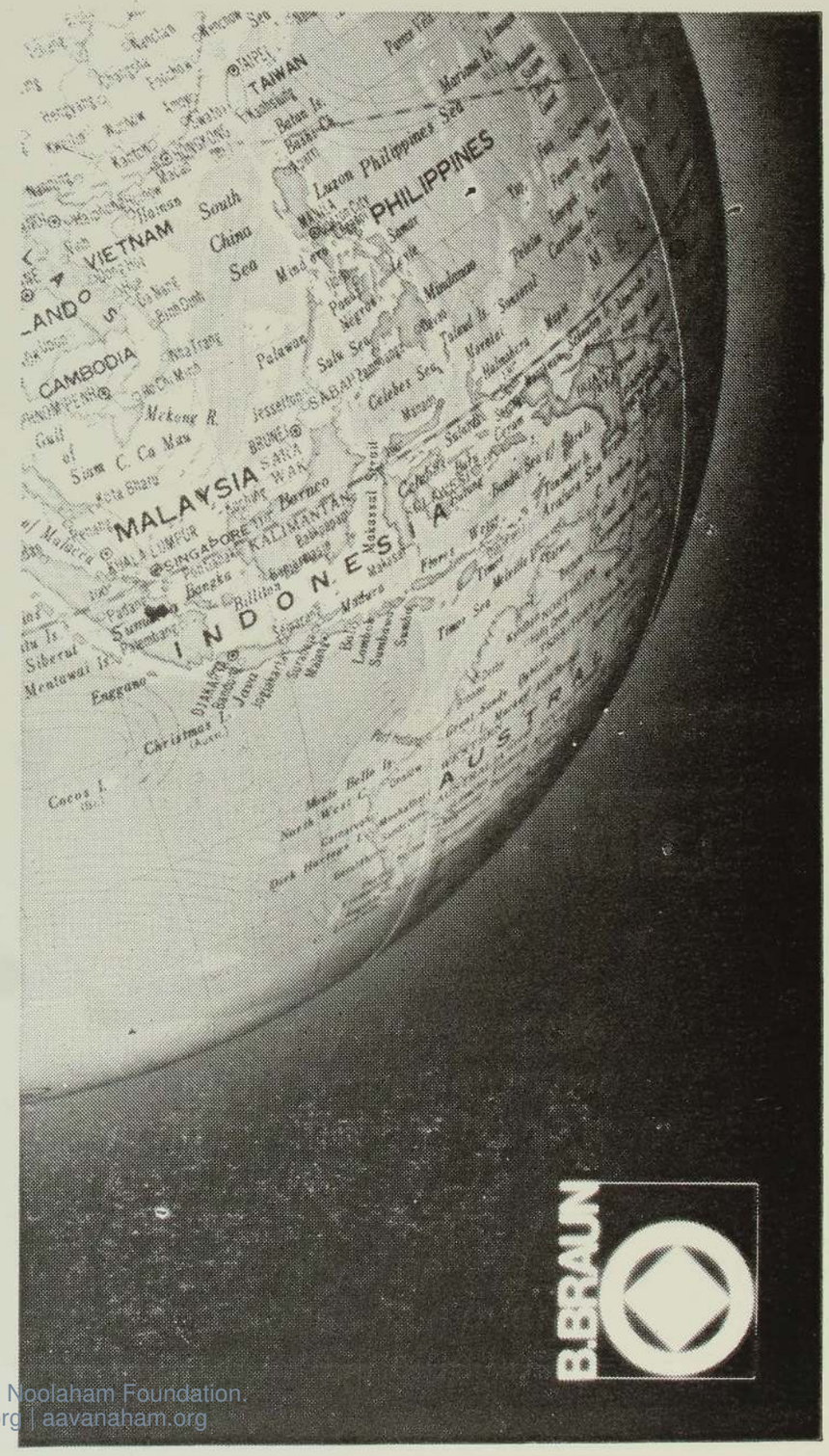
WORLDWIDE COMMITMENT TO MEDICINE

It is a commitment that guides the daily efforts of the B. BRAUN MELSUNGEN AG Group of Companies in over 100 countries; and it is this same commitment that has made it one of the largest international hospital supply firms.

Established as a pharmacy in 1839, this company is now run by the fifth generation of the Braun family. The 150-year manufacturing and marketing tradition stands as a guarantee of the finest quality in the full range of products, including:

- Sutures and Surgical Specialities
- Medical Single-Use Products
- Intravenous Solutions
- Infusion Pumps
- Dialysis Equipment & Solutions
- Medical & Laboratory Apparatus

This commitment to medicine continues to motivate the Group to providing ever-increasing high standards of health-care and quality medical products



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D-3508 Melsungen
West Germany

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Malaysia

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MACKWOODS LTD.
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10 Gnanartha Pradeepa Mawatha
Colombo 8
Tel: 597965-9
Telex: 21153 MACKWOOD CE
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