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Vol. 24 December 1989 No. 2

CONTENTS

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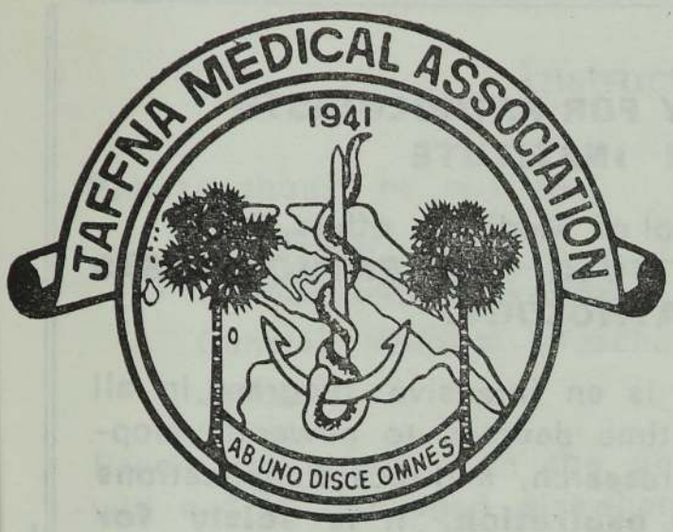

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1. *Standard journal article*: Ganeswaran T. Rajarajeswaran R. Attempted suicide in a Northern town of Sri Lanka. *Jaffna Medical Journal* 1989; 24: 3—9.

2. *Books and other monographs*

(a) Personal authors — David Morley. Paediatric Priorities in the developing world. London: Butterworth & Co. 1973: 161'

(b) Chapter in book — Busvine JR. Insecticides for use against pests of public health importance. In Hosbon W. ed. The Theory and Practice of Public Health. London: Oxford University Press, 1965: 162—5

Please see *International Committee of Medical Journal Editors, Uniform requirements for manuscripts submitted to biomedical Journals, Br Med J 1988*; 296: 401-5. for futher deatils

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Editorial

A Dental School in Jaffna

Jaffna Medical Journal 1989, **24**, *51—52*

A comprehensive study of oral health (1) carried out in Sri Lanka during recent times gives some startling facts about the oral health condition of our people. It was observed that 98.3% of the adults in the North-Eastern province of Sri Lanka had periodontal disease and a mean DMFT (Decayed, Missing and Filled Teeth) of 8.7. Out of them only 1.95% were filled.

The above survey also noted that diseased gums and dentofacial anomalies were commoner among the Tamils than other ethnic groups.

In spite of this high morbidity only a very small percentage (approx. 11%) of those affected visited a dentist and a still smaller percentage received appropriate treatment.

The problem lies with the providers of oral health care and the consumers. Both tend to neglect dental care for economic and cultural reasons and also due to ignorance.

Even though dental care froms one of the components of Primary Health Care, very little concerted effort has been made to reduce its morbidity. Systematic preventive dental care for the general population is almost non existant, except for the limited work among school children by School Dental Therapists.

The knowledge about preventive dental care is very poor. Most people go to a dentist for the first time (or in some cases on every occasion) for extractions 79.3% of procedures carried out in hospital dental clinics in 1988 in Sri Lanka were extractions (2) and only 5 45% permanent fillings. The ignorance of the population is a consequence to lack of awareness being created for restorative dental care. This again is due to lack of trained manpower.

The North-Eastern province hasn't a single dental technician and only one Dental Surgeon for 52,000 people. In the Jaffna district one school dental therapist looks after 67,000 school children.

The Dental Health manpower in Singapore is compared to that of North-Eastern province of Sri Lanka in Table 1. Singapore has a population of 2.6 million which is comparable to the poulation of North-Eastern province which has a population of 2.4 million.

Table 1: Dental Health Manpower

	*North-Eastern province of Sri Lanka (1988)	Singapore (1983)
Dental Surgeons	48	113
Dental Therapists	11	276
Dental Technicians	Nil	42
Assistant Dental Nurses	Nil	110
Population (in millions)	2.4	2.6

* *Source*: *Annual Health Bulletin 1988. Ministry of Health, Sri Lanka.*

It is clear that there is an acute shortage of Dental Health Personnel, especially Dental Therapists and Dental technicians, without whom no proper oral health care could be achieved.

It is time to think of commencing a Dental School in Jaffna to train Dental Surgeons, Therapists and Technicians under one roof.

References

1 Dental Health Unit National Oral Health Survey Sri Lanka 1983-84, Ministry of Health 1985.

2 Annual Health Bulletin 1988, Ministry of Health Sri Lanka 1989.

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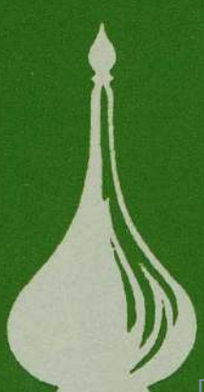

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Presidential Address 1989/90

*Dr. A. Wijayaratnam M. B. B. S (Ceylon) D. P. H (Bristol)

Jaffna Medical Journal 1989, **24,** *53–66*

Prof. D. Ramadas, the immediate past President, respected members of the Council, the distinguished past Presidents, the members of the Trustees, honoured guests, fellow members and students.

I would like to thank the members of this Association for the trust and confidence that thay have placed in me in electing me to this post of President - the highest honour that the members of this Association can bestow on one of their associates. I accept this post with all humility and I assure the members that I would do my utmost to uphold the traditions of this Association and I look forward to your co - operation and support in carrying out my duties to the best of my ability.

I would like to recall at this juncture, the splendid manner in which the past Presidents and the members of the Council and the Associaton have successfully steered this august body and kept alive its traditions, through very trying situations over the last four to flve years. This Association, the 2nd oldest of its kind in Sri Lanka will soon be celebrating its Golden Jubilee in the year 1991.

I most sincerely thank the immedlate past President, Prof. D. Ramadas for investing me with this insignia of Office and for the kind words he has spoken of me. I am in particular very happy to have been inducted by Prof. Ramadas as I happen to share with him some common interests - namely in the field of Community Child Health.

I have been in the field of Community Medicine for over a period of 23 years and having had the opportunity of observing the changes that have occurred in this field over the last few decades, I have chosen to address you all today on the manner in which the speciality of Community Medicine has evolved over the ages (in brief) and at some depth about the changes in the recent past with special reference to Sri Lanka and also on the vital role of the WHO in Community Health Services.

When one traces the history of Community Medicine to the very early ages, one finds that the primitive man believed diseases to be of supernatural origin, being subject to magical or mystical influences. These beliefs are still retained to some extent in the developing countries and they become a major barrier to modern public Health measures being adopted in these countries.

It was in the first millenium B. C in Greece, that the first step towards a modern approach to medicine and its clinical practice began. Hippocrates, born about 460 B. C was the first to consider disease as a natural event and he was also the first to bring

* *Medical Officer of Health, Kopay.*

into practice the cautious interpretation of cause and effect in relation to diseases. Of his writings, the book titled, "Airs, waters and places" may be considered as the first to deal with the principles of Epidemiology of diseases. [1]

During the 2nd century A. D, another Greek physician, Galen followed in the the steps of Hippocrates and amongst his writings, there was one on Hygiene.

This was during the Roman era and the Romans laid great emphasis on sanitation.

The understanding of the contagious diseases was much advanced during the Arabic empire from about the 6th century. Systems of medicine were developed in India from the early times and it is believed that there was a free exchange of thought and experience between the Hindu, Arab, Persian, Greek and Jewish scholars. Indian medicine played the same role in Asia as the Greek medicine in the west. [4]

During all this period, Europe remained in the dark ages. Mysticism flourished in Europe and their living conditions were primitive resulting in several epidemics. Europe emerged from its intellectual darkness only about the 13th century.

15th century marked the renaissance of learning and the birth of science. Great scientific works like the 'Fabrica' Medicine and Fracastoro's 'De Contagione', appeared in close succession and these dispelled ignorance about diseases and provided some evidence for the specificity of diseases and the nature of infection. The publication of the 'Utopia' in 1516 by Sir Thomas More, Lord Chancellor to Henry the VIII, gave an important key to Public Health, namely, the necessity for organised action for and on behalf of the whole community. The lessons of ancient Greeks. Romans and the Arabs were being learnt again.[1]

Governments began to realise the importance of country-wide census and the first ever census was conducted in Sweden in 1741.

Thomas Malthus (1766—1854) wrote his famous essay on the "principles of populations" which postulated that the world population advances by geometric proportions, whilst agricultural production advances by arithmetic proportions.

About this time, (1798), Edward Jenner, made the important discovery of vaccination against smallpox. It is reported that the successful smallpox vaccination programmes carried out in India and Sri Lanka in the early nineteenth century, at a time when smallpox vaccination was not fully accepted in the United Kingdom, pleased Jenner so much, that he wrote to his friend James Moore in a letter dated 28th February 1810, saying, 'In the Island of Ceylon, my account states that upwards of thirty thousand had been vaccinated a twelve month ago. I could march you round, the world and wherever you rested, should see scenes like these. There I have honour, here I have none.' [3]

It is also interesting to note as to how we are now concerned much about the maintenance of the 'Cold

chain' in our Expanded Programme of Immunization, whereas during the time of Jenner, the cow-pox virus was transported from United Kingdom to far off countries by the 'human warm chain' - that is by carrying out a chain of vaccinations of persons on board the ship during the long journey. [3, 12]

The industrial revolution that took place in the United Kingdom from early eighteenth centry, led to mass shifting of populations from the clean and safe environment of the villages to the overcrowded and highly insanitary industrial towns. These industrial towns, thus became the ideal grounds for the occurrence of repeated epidemics of smallpox, cholera, yellow fever, plague and other diseases. In order to control them, boards of health were set up throughout U. K around 1833. Thus, began the first organised Public Health Services In the world and this became the model for the other countries. [1] Registration of births and deaths was made compulsory in U. K in 1837.

Edwin Chadwick, who is considered as the Father of Public Health in the United Kingdom, carried out the first ever contrywide survey of the living conditions of working population in 1840 and its startling findings, led to the enactment of the Public Health Act in 1848.[1,4]

Sir John Snow, an Anaesthesiologist. who investigated an outbreak of cholera that occureed in London in 1849, wrote the classic monograph, titled, "On the mode of communicaiton of cholera" which could pass off today as a current epidemiological report of a cholera outbreak. This report was published at a time, when the specific causes of diseases were not known.[1]

In 1848, Dr. John Simon, the first Medical Officer of Health, London, organised intensive epidemiological studies throughout U. K. with the help of the other Medical Officers of Health. Thus, began the change of the concept of Public Health from a mere engineering exercise to scientific discipline in epidemiology.[1,4]

During the end of nineteenth century and the beginning of this century, far reaching discoveries took place at short intervals with almost bewildering speed. Most of the causative organisms of diseases were discovered during this period. This was soon followed by the discovery of other vaccines.

It was about this time that vulnerable groups were being identified in U.K for special health care. Thus was born the special health care services for the school children, infants and preschool children and the pregnant mothers. William Ballantyne was the first to spotlight the necessity of care for the pregnant mothers and he published the book titled, 'Antenatal pathology and Hygiene' in the year 1901. In 1898, the first infant welfare centre was commenced at St. Hellen's. Health Visitors commenced their work in U. K around this time and they were referred to as "Lady Health Missioners." [1] There was great enthusiasm shown for public Health in U. K about this time leading to the enactment of several Parliamentary Acts like the Midwives Act, the Education Act, the Notification of Births Act, the Children's Act etc.

In Sri Lanka, the portugese and the Dutch provided Western medical care mostly to their service personnel and their civilians. The British too adopted the same attitude during the early part of their stay here. The first hospital for the civilians was constructed by the British at pettah in 1817 and till about 1845, hardly any other civil hospitals were constructed. However, the American Missionaries put up Mission Hospitals in Jaffna from about 1820 onwards. Friend - in - Need - Societies in Jaffna, Trincomalee, Kandy and Moratuwa which were organised with the support of the Government, constructed civil hospitals in those towns around 1845. Due to the keen interest shown by some of the British Governors and the British Medical Heads of the Military Medical Department, an independant Civil Medical Department was commenced in the year 1858. This heralded a spate of activities leading to the establishment of a network of hospitals and dispensaries throughout the Island. The Government also appointed Boards of Health for each province to be in charge of sanitation. These Boards were set up under the Public Health Act passed in 1862. Specialised Campaigns were set up to deal with diseases like malaria, hookwo.m infestation, filariasis etc. The first Maternity Hospital (the De Soysa Lying-in Home) was built in 1879. [3]

All these intensive health activities resulted in a decline in the Infant Mortality Rate from 146 per 000 live births in 1870 to 90 in 1948 and the Crude Death Rate from 22.8 in 1870 to 13.2 in 1948. with the importance of Public Health being realised, the name of the Civil Medical Department itself was changed to thal of 'Department of Medical and Sanitary Services' in 1925 Dr. S. T Goonesekara was the first Sri Lankan to Head this Department in the year 1936[3]. The 'Health Unit' system, which is the origin of the present system of Medical Officers of Health, was first commenced in 1926, the first to be established being the one at Kalutara. Tha establishment of the Health Unit System, introduced a new era in the Public Health work in Sri Lanka.

Within about ten years of its commencement, it made quite an impact on the health status of the country particularly in the rural areas. Even medical offlcers of the neighbouring countries came to Sri Lanka to study this system. The book titled, "Health Unit procedure in Ceylon" was authored by Dr. S. F. Chellappah and Dr. W. P. Jacocks (a Rockefeller Foundation Advisor) and it was in great demand in the neighbouring countries too. Dr. S. T. Goonasekara, in his foreword to this book, describes Dr. S. F. Chellappah and Dr. W. P. Jacocks as the two pioneers of this very successfull Health Unit system in Sri Lanka. Dr. S. F. Chellappah was awarded the O. B. E by the British Goverment[5].

By the time the British left the Island, there were 183 large hospitals 45 Rural Hospitals and 240 Central Dispensaries in the Island. The development of the Health service in Sri Lanka during the British period was to some extent influenced by the employment of immigrant South Indian labour. In order to prevent classical cholera and

smallpox being brought into this country hospitals were constructed along the Northern Route from Talaimannar to Matale to care for this labour force and to serve as transit quarantine camps. The District Hospitals in the Central, Southern, Sabaragamuwa and the North-Western Provinces too were constructed mainly to provide medical care to the estate labour force[3].

Though epidemics of classical cholera and smallpox occurred frequently in this country in the past, these dreaded diseases never got a permanent foothold here, due to the efficient quarantine and other preventive measures adopted at that time[3].

The pattern of the maternal mortality in Sri Lanka over the last 100 years, as presented by Dr. J. N. Rodrigo, shows how the rate had declined from 21.7 per 1000 live births in 1881

Table 1
Maternal Mortality in Sri Lanka
1881 — 1981

Year	Total Maternal Deaths	Maternal* Mortality Rate
1881	1623	21.7
1901	2068	15.4
1921	3362	21.0
1931	4117	20.8
1935	5165	26.8
1941	3360	15.3
1947	3963	16.6
1948	2733	8.3
1951	1710	6.5
1961	949	2.6
1971	512	1.4
1981	245	0.6

* per 1000 live births

to 0. 6 in 1981 (Table I)[6]. It shows the highest rate as 26 in 19 5, the year of a major malaria epidemic in Sri Lanka. The sharp decline from 16.6 in 1947 to 8.3 in 1948 is attributed to the decline in the incidence of malaria and the setting up of more and more health institutions. Jaffna had its pride of place in the country, when it shared the low value of 0.6 as the maternal mortality rate in 1981 along with the District of Colombo. Unfortunately, the maternal mortality rate has now gone up in Jaffna and I shall come to that later in my address.

When I assumed duties as Medical Officer or Health, Mannar, in 1977, I was fortunate to retrieve from the office stores, an interesting and a very valuable Health Survey report of the late Dr. P. Rajasingham, who subsequently served as a Deputy Director (Public Health Services) in this country[7]. This report is dated 1937 and was written by him when he served as Field Medical Officer at Mannar. This survey report gives in detail the health indicators of Mannar by villages from 1921 to 1935 and other useful health Information. The highest Infant Mortality Rate recorded was 474 per 1000 live births in the year 1924 for Mannar District and the highest maternal mortality Rate has been 57 per 1000 live births in the year 1931 for Mannar Town (Table II)

In his report, he states that the high Maternal Mortality was due mainly to Anaemia caused by hookworm infestation and Malaria. He also points out in his report, as to how the commencement of the ma–

Teble 2
Infant and Maternal Mortality Rates +
Mannar Town
1931→1935

Year	Infant Mortality Rate	Maternal Mortality Rate
1931	336	57.1
1933	292	31.1
1934	176	17.7
1935	144	10.0

* per 1000 live births

ternal and chlldhealth services in Mannar Town in 1933, brought about a sharp decline in the Infant Mortality Rate and the Maternal Mortality Rate by almost 50% over the next one to two years. The population of the males in Mannar District at that time was about 30% higher than the females and this he attributes to the high female mortality rate and the high maternal mortality rate. Pregnancy at that time was considered by women as a dreadful ordeal to go through.

This Health Survey Report of Dr. P. Rajasingham is now preserved in the Department of Community Medicine, Faculty of Medicine, Jaffna.

It is believed that the highly developed irrigation systems that existed in the North Central Province of Sri Lanka in the 12th century, collapsed due to the frequent epidemics of malaria and the foreign invasions. The biggest malaria epidemic in Sri Lanka was in the year 1935, when about 3 million of the 5 million population in the country at that time were affected by it and about 80,000 people died of it. [3]

The introduction of DDT spraying in 1945 was a turning point in malaria control and within a few years, there was a sharp decline in the number of malaria cases and by 1964, there were only 17 cases in the entire Island. However, this success was only short lived, as within a few years, there was a resurgence of malaria in Sri Lanka.

In 1957, the WHO launched a Global Malaria Eradication programme and it succeeded in the whole of Europe, North America, Middle East and large areas of South America. However, by mid-seventees, there was a resurgence of malaria in several countries, mostly the developing countries of Asia and Latin America. The chief reason for this resurgence was the fast developing resistance of the mosquito vector to the DDT. This resistance was first observed in 1950 in Greece and by 1968, the resistance was detected in several countries including Sri Lanka. At the peak of this resistance to DDT in Sri Lanka in 1968, there were over 400,000 cases of malaria The other important reasons for this resurgence are the exorbitant cost of the alternate insecticides, a decline in financial aids, increasing resistance of the plasmodium falciparum to drugs, lack of sufficient concurrent research on alternate strategies, administrative failures and the dearth of competent Malariologists. It is said that the generation of 'blood, mud and sweat' malariologists had virtually disappeared by then. [8]

In 1978, the WHO changed its strategy from one of Malaria Eradication to Malaria Control which re-

quired countries to carry out Anti-malaria measures with the objective of eliminating deaths due to malaria and to reduce the incidence of malaria to levels that will not affect the socio-economic development of those countries.

Smallpox was described by the historian, Macauly, as the 'Most terrible of the Ministers of death.[9] Repeated epidemics of smallpox have swept across the world over the ages, decimating populations and altering the course of history. Over the first half of this century, smallpox was eliminated from most countries of Europe and North America but it remained endemic in most of Africa, Asia and South America. When the WHO assembled first in 1948, it expressed concern over the problem of smallpox in the world. In 1959, the concept of Global Eradication of smallpox was accepted by the WHO, following a report by Prof. Viklov Shadnov, of USSR, who had the experience of successfully eliminating smallpox from Russia in 1936. The Global Eradication programme of the WHO really got off in 1966 with the WHO itself providing sufficient funds. The objective of the programme was to eradicate smallpox from the world in ten years from 1966. At that time, smallpox was endemic in 33 countries with a population of 1200 million and in that year, there were 10 to 15 million cases of smallpox in the world with about 2 million deaths. By 1973, most of Africa, Brazil and Indonesia became free of smallpox. The Indian subcontinent remained a major endemic area but with intensive disease surveillance and containment activities, eradication was achieved there in 1975. War-torn Ethiopia and Somalia remained the last battle ground for the final wiping out of smallpox from the World in 1977. The WHO declared the world free of smallpox in December 1979.

What then are the factors that made eradication of smallpox feasible ?

1) The ease with which the cases can be recognised.
2) The absence of subclinical cases.
3) Tha absence of any long term carrier state.
4) The availability of highly effective freeze-dried vaccine which does not require refrigeration.
5) The transmissibility of the infection being very low and requiring very close contact.

and

6) The absence of any animal reservoirs.

However, in reality, detection of outbreaks in the very remote and almost inaccessible areas of Africa and the Indian subcontinent posed immense practical problems. Quite often, helicopters, camels and horses had to be used in such areas. At times, the programme had to go on in the midst of civil wars. At first, countries were concentrating on mass immunization programmes, and it was after much pursuation by the WHO that the strategy was changed to more emphasis being laid on active disease surveillance and early containment activities, which then producedd dramatic results.[10]

Donald A Henderson, Dean, John Hopkins School of Hygiene and Public Health, who was the Director of the

smallpox Eradication programme at the WHO at that time, had this to say of the success of this programme :

"The success of the Global Smallpox Eradication Campaign, I feel, reflects the principles of sound management - a clear identification of objectives, a definitive plan for carrying out the programme, the development of techniques for independant assessment of what was being achieved factually and modification of the programme accordingly' functional delegation of resbonsibility and authority and an effective ongoing programme of skill training at all levels. Dedicated, tireless, imaginative leadership and inspired local level workers made it work[11].

The experience and the knowledge gained during the smallpox eradication programme, gave the WHO the strength and will to undertake other global Public Health ventures. The smallpox eradication, demonstrated clearly, the cost effectiveness of a population-wide programme for disease control. After the success of the smallpox eradication programme, it was found that specific-purpose Public Health programme to achieve certain clear and specific objectives, usually within a definite period of time, received willing support and commitment from the politicians and the public alike, the world over. This support was not forthcoming earlier[10].

Thus, the global Expanded Programme of Immunization (E. P. I.) was launched by the WHO in 1977 with the objective of providing 6 vaccine antigens to all children throughout the world by the year 1990. Further the WHO being concerned about the existing gross inequalities in the health status of the people particularly between the developed and the developing countries, as well as within the same countries. resolved at its 30th Assembly held in 1977: 'That the main target of all countries and the WHO in the coming decades would be the attainment of all citizens of the world by the year 2000 A. D. of a level of health that will permit them to lead a socially and economically productive life"

The degree of ineqality of the health status between the developed and the developing countries, can be gauged from the wide gap that exists in the health indicators such as Infant Mortality Rate, Life Expectancy at birth etc. The Table 3 depicts this

Table 3
The need for primary health care

Health Indicators (1977)	Most Developed Countries	Least Developed Countries
Infant mortality rate (Per 1000 live births)	10—15	Over 140
Proportion of deaths of children under 5 years. of total deaths (in %)	5	40
Proportion of new borns of low birth weight (in %)	5	40
Life expectancy at birth (in years).	70—75	35—40

clearly. The Infant Mortality Rate ranges from 10 to 15 per 1000 live births for the most developed countries to over 140 in the least developed countries. The proportion of deaths of children under five years of age of the total deaths in the countries, ranges from 5% in the most developed countries to 40 to 50% in the laast developed countries. The proportion of new borns with low birth weights ranges from 5% in the most developed countries to 40% in the least developed countries. The life expectancy at birth, ranges from 70 to 75 in the most developed couutries to between 35 to 40 in the least developed countries[2].

It is estimated that 81% of the children in the world live in the developing countries and a great majority of them are exposed to what one might call a 'harsh environment namely, an environment of malnutrition proverty, poor housing, illiteracy, particularly female illiteracy, insanitary conditions and lack of proper health care. Starting with such a serious disadvantage. most of these children have little chance of realizing their full economic and social potential. They will in turn give birth to another unhealthy generation, thus helping to perpetuate a vicious cycle. 77% of the infant deaths in the world occur just in two regions namely Africa and South Asia. Of the 2 million low birth weight babies born in the world, every year, 22 million are born in the developing countries.

The WHO—UNICEF Conference held at Alma Ata in USSR in 1978, endorsed the concept of Primary Health Care (PHC) as the way to "Health for all by the year 2000 A. D". Primary Health Care is preventive, promotive, rehabilitative and curative in nature. It comprises a package of Public Health activities such as maternal and childhealth, E. P. I, control of communicable and certain noncommunicable diseases, weter and sanitation and health education. Primary health care lays great emphasis on community participation and it really represents a reformulation of some of the most basic tenents of Public Health. Primary health care also incorporates another important global programme of the WHO, namely the Control of Diarrhoeal Diseases (CDD) which actively promotes the use of Oral Rehydration Salts (ORS) amongst other things. ORS is considered today as a very effective, cheap and easily available tool for the prevention and control of dehydration in children.

A study of infant and childhood deaths carried out in the area of M O. H. Kopay during 1983/84, over a period of one year, showed the leading causes of deathes as diarrhoeal diseases and acute respiratory tract infections with malnutrition as the underlying cause in about half of them[13, 18]. An extensive Inter-American study of 35, 000 deaths amongst children revealed the same causes in about the same proportion.

Our National childhealth programme lays great emphasis on promotion of breast' feeding, regular growth monitoring of children for purposes of early detection of malnutrition, provision of Triposha for the malnourished children, immunization, education regarding early introduction of supplementary feeds early feeding during

diarrhoeal episodes and the use of oral Relydration salt solution (ORS) for correction of dehydration (amongst other activities). The WHO has launched a global programme for the control of Acute Respiratory Tract Infections (A. R. I) and at present this programme is being carried out in a few areas in Sri Lanka.

The Primary Health Care concept has now been accepted by sevaral countries and it has already brought about a greater awareness amongst the communities regards their health needs and has resulted in greater community participation in solving their problems.

When the WHO launched the Expanded Programme of Immunization in 1977, the world-wide immunization coverage of infants was under 5% and the estimated deaths due to EPI target diseases was 5 million per year. From about 1984, there was a sudden acceleration in the immunization coverage in many countries including Sri LanKa. By 1985, the deaths due to the EPI target diseases had come down to 3. 5 million.

Table 4

*** Incidence of E. P. I. Target diseases—Sri Lanka**

E P. I, Target Disease	1978	**1986**
Pollomyelities	1.0	0.1
Diphtheria	1.5	0.0
Tetanus (All Ages)	14.2	2.1
Neo-Natal Tetanus	215.9	7.0
Pertussis	4.9	1.0

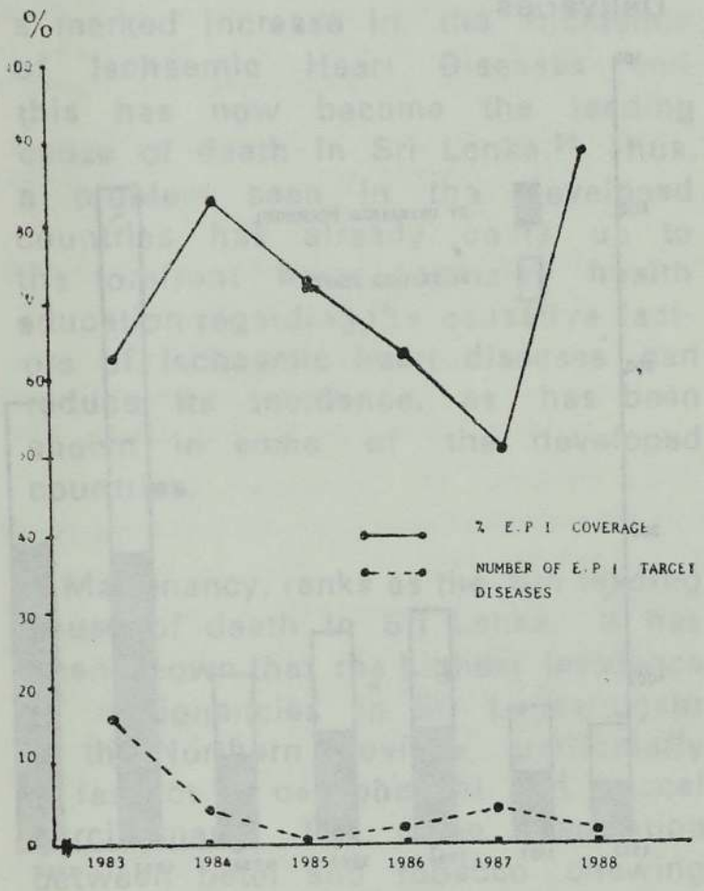
* Rate per 100,000 population

The sharp decline in the incidence of the EPI target diseases in Srl Lanka is shown in Tabie 4, 12. I am sure. my senior colleagues here will recall their days as medical students or young housemen, when there were separate wards or units at Lady Ridgeway Hospital and at other Provincial Hospitals for the treatment ot Diphtheria patients and how often they used to be disturbed for emergency Tracheostomies; the separate wards at Lsdy Ridgeway for the management of Tuberculous Meningitis in children and the seasonal overcrowding of the Out Patients Departments of the various Institutions in the Island with hundreds of exhausted mothers carrying children witn the now unheard of " whoop ".

It has been shown that the usage of vaccines is the most cost effective method of preventing illnesses. The world is new on the threshold of another major revolution in vaccine research. Modern biotechnological advances are being made along two different approaches - one, being manufacture of synthetic peptide antigens and the other is through genetic engineering. These lines of research are being used to produce vaccines against malaria. diarrhoea diseases and improved vaccines aganst cholera and typhoid fever. Some of these vaccines have alreody undergone limited trials. [12]

My address would not be complete, unless I touch on the manner in which the military operations and the unrest that prevailed in this part of the country over the last four to five years has affected our community health services. My comments are based on

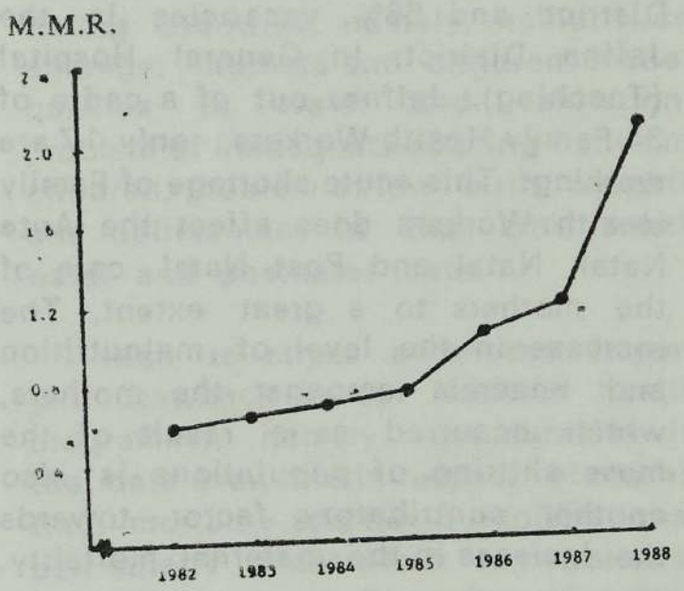
Figure 1 : E P I Coverage and target Diseases in area of M. O. H. Kopay. 1983 –1989.



reviews carried out at the regional level. The EPI coverage in my area as shown in Figure 1, reached very satisfactory levels in the years 1984 and '85 resulting in the decline ef the EPI target diseases from 16 in 1983 to 3 in 1984 and nil in 1985. However, due to the disturbances in the area, the EPi coverage for three doses of Triple and Polio vaccines, dropped from 82 . 5% in 1984 to 52% in 1987. resulting in an increase again in the EPI target diseases to 2 in 1986 and 6 in 1987. At the regional level, the incidence of Poliomyelitis, increased from a low incidence of 3 in 1986 to 97 in 1987. Further, due to the mass shifting of populations, the nutrition level of the children too had got affected.

The most striking impact of the disturbances has been on the maternal mortality rate in the region The Maternal Mortality Rate rose from a very low figure of 0.6 per 1000 births in 1981 and '82 to 1.2 in 1987 and 2.2 jn 1988 (Figure 2). [12] Various

Figure 2 : Maternal mortality rates* Jaffna & Kilinochchi districts 1982—1988



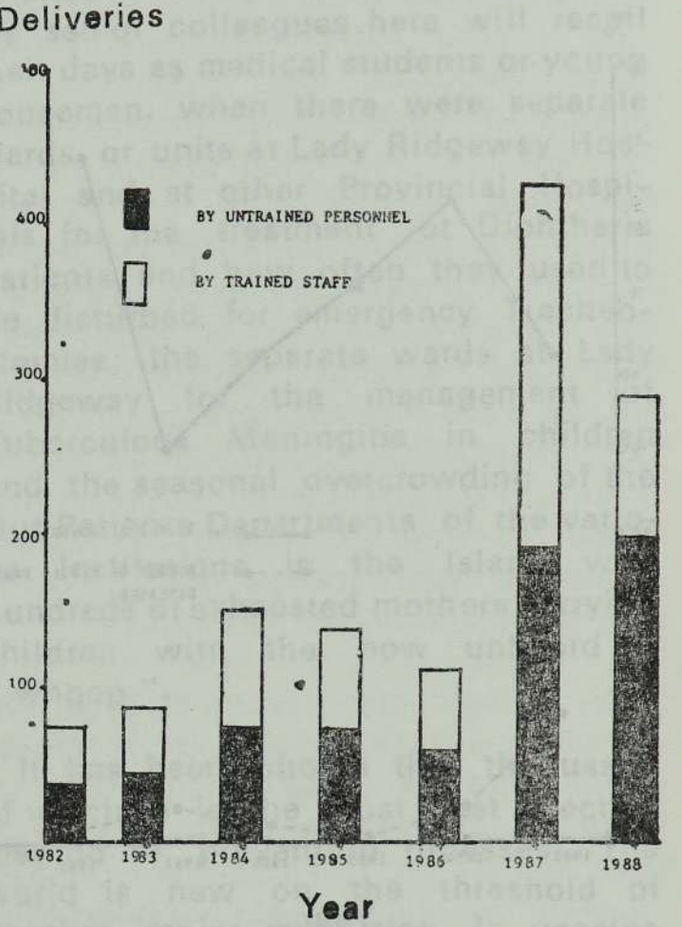
* Rate per 1000 live birth

reasons have been attributed to this increase. some of which are connected with the disturbed situation in the region, namely, frequent disruption of public transport, breakdown in the telecommunication system, frequent imposition or curfew hours, particularly during the nights, disorganisation of the clinic services in the periphery and the lack of ambulances and official transport for the Regional Officers and the Medical Officers of Health-Further, unlike in the past, a fair proportion of the peripheral medical institutions in the region are not manned by Medical Officers. From 1975 to 1982, 17 of the 19 medical institu-

tions in the periphery were manned by Medical Officers, whereas since 1986. only 9 medical institutions are n charge of Medical Officers. Another major factor is the acute shortage ot Family Health Workers in the region. No regular training of Family Health Workers has been undertaken in this region since 1982 resulting in 82% vacancies in the Killinochchi District and 66% vacancies in the Jaffna District. In General Hospital (Teaching), Jaffna, out of a cadre of 34 Family Health Workers, only 17 are working. This acute shortage of Family Health Workers does affect the Ante Natal, Natal and Post Natal care of the mothers to a great extent. The increase in the level of malnutrition and anaemia amongst the mothers, which occurred as a result of the mass shifting of populations is also another contributory factor towards the increase in the maternal mortality.

In our national maternal and child-health Programme, we have over the last several years been promoting more hospital deliveries, in order to minimise maternal morbidity and mortality and to minimise dangers to the new - born. Even deliveries at home by the qualified midwives are discouraged. However, a review of the home deliveries in my area over the last six years, shows how the trend has changed. Figure 3 shows a marked increase in the home deliveries from 48 in 1982 to 404 in 1987 and 260 in 1988, with a corresponding increase in the number of home deliveries by untrained personnel from 25 in 1982 to 159 in 1987 and 165 in 1988.[14] Of the 42 maternal deaths that occured in the Jaffna and Killinochchi Districts in 1988, 8

Figure 3: Home deliveries in area of MOH Kopay 1982—1988



mothers were delivered by untrained personnel. This tendency towards home deliveries is really due to the fear that the mothers have in travelling to the hospitals and spending nights there in such uncertain times. I consider this as a major setback in our Maternal and Childhealth services. The data available for this year has shown a decline in the number of home deliveries in my area.

Of late, the Ministry of Health has commenced training of Family Health Workers here. Ambulances and jeeps too have been provided by the Ministry and the UNHCR. Compared to the 42 Maternal deaths in the Jaffna and Killinochchi districts during 1988, there have been so far 23 deaths this year.

When one studies the morbidity and mortality pattern in Sri Lanka over the last two decades, one finds a marked increase in the incidence of Ischaemic Heart Diseases and this has now become the leading cause of death in Sri Lanka.[15] Thus, a problem seen in the developed countries has already come up to the forefront here. Intensive health education regarding the causative factors of Ischaemic heart diseases can reduce its incidence, as has been shown in some of the developed countries.

Malignancy, ranks as the 9th leading cause of death in Sri Lanka. It has been shown that the highest incidence of malignancies in Sri Lanka occur in the Northern Province, particularly in respect of oesophageal and buccal carcinomas.[16] The close association between betel and tobacco chewing and buccal carcinoma has been clearly demonstrated by several studies.

Psychiatric problems are now one of the ten leading causes for hospitalization in the Jaffna District.[15] The chief reason for this being the severe mental stress that the people have been subjected to, over the last 4 to 5 years. The facilities available at the Medical Institutions to manage this problem is also not adequate.

A problem that is fast becoming a threat to our society is the problem of drug abuse. It is believed that this problem is growing fast and it can turn out to be a menace. AIDS infection is yet another problem that one has to be vigilant about.

We here in Jaffna, have an enormous task ahead of us, as we have to 'build up' all our losses in respect of manpower, equipment' buildings etc. that occurred as a result of the disturbances and to consolidate ourselves in order to bring our health services to what prevailed around 1984 and 1985 and steadily develop it further. We still have with us several of the problems of the developing countries, namely, malnutrition amongst mothers and children, inadequacies in water and sanitation, problem of inadequate spacing between children, problem of low birth weights and deficiencies in the ante natal, natal and postnatal care.

I wish to stress on another important drawback in our National health programme, namely, inaccuracies in the data available in respect of morbidity, mortality and death registrations particularly infant death registrations. The Infant Death Rate for the Jaffna District for the year 1984 has been given as 17 by the Registrar General, the lowest for the Island, the rate for the Island for that year being 23, Studies carried out during the same period by the Department of Community Medicine, Jaffna, in the area of M. O. H. Kopay has shown the infant mortality rate to be 36.[17] It is also equally important to maintain correct records in the medical institutions in respect of the diagnosis and causes of deaths. Health planning and evaluation can only be carried out efficiently if correct data is made available.

Post-Graduate Education in Community Medicine too has gone through changes in order to meet the growing challenges of Community Health. In

the United Kingdom, it was statutory even as far back as 1888, for all Medical officers of Health in charge of areas with a population of over 50,000, to have obtained the Diplomo in Public Health (D. P. H.). However, this was enforeced only from 1922.[1] From mid-seventees, those in Community Health were required to obtain the Membership of the Faculty of Community Medicine (M. F. C. M.).

In Sri Lanka, the Diploma in Public Health conducted by the Universities in the United Kingdom or the Master of Public Health (M. P H.) conducted in the United States and Australia were the accepted Post - Graduate qualifications. However, after the Post Garduate Institute of Medicine (P. G. I. M.) was established in 1980, the PGIM commenced conducting the M.D. in Community Medicine. This course includes a period of study abroad.

Ladies and Gentlemen, I have in my address dealt in some depth on the manner in which the present day speciality of Community Medicine has evolved. It is said that the study of the past helps to meet the needs of the present and to plan for the future. This axiom applies very appropriately to the field of Community Medicine.

I wish to thank you all for giving me a patient hearing.

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Second Audit of the Intensive Care Unit in General Hospital (Teaching) Jaffna

[1] R. Ganeshamoorthy [2] S. Sivakumaran [3] W. W. Paramanathan
[3] Y. Kulasekaram [3] S. Sivapalan [3] N. Sritharan

Jaffna Medical Journal 1989, 24, 67–70

Summary

Case records of 869 patients admitted to the intensive care unit of a teaching hospital, during the second two-year period are reviewed. It revealed a bed occupancy of 86% and an overall mortality of 28%. Types of illnesses encountered, the demand for the type of service and mortality related to illnesses are discussed. These results are compared with those of the first two year period.

Introduction

The idea of a medical audit, which originated in North America is now accepted all over the world. The objectives of a medical audit as stated by Charles D. Shaw[1] are; education, planning, evaluation, research and anticipatory diplomacy. Furthermore, regular auditing of a unit such as an Intenstve Care Unit (ICU), which taxes the resources of a hospital, is mandatory to justify its existence.

The six-bedded multidisciplinary ICU at General Hospital (Teaching) Jaffna was established in January 1984. The first audit of this unit covering the first two years had been already published in the Jaffna Medical Journal[2]. This audit covers the second two years 1986 and 1987. There was no change in the administration, staffing and policy of admission made during these two years. The running cost of the unit had increased to eighty thousand rupees per month.

The military operations, that took place in and around the hospital had affected the functioning of the ICU during this period. The explosion of a shell fired into a general medical unit of this hospital on the 30th of March 198' shattered the confidence of the staff and for reasons of safety, the ICU was shifted into a room in the ground floor of the radiology department on the 30th of April 1987 As there was no space to acommodate the entire unit in this room, the bed strength had to be reduced to three. When the security situation improved, the unit was shifted into its own building on the 5th of July 1987. The unit was closed on the 21st of October 1987, when the Indian Peace Keeping Force launched its military operation. The unit was reopened on the 25th of December 1987. Despite all these hardships, the unit felt that it was dutybound to present this audit.

[1] *Consultant Anaesthetist,*
[2] *Consultant Physician.*
[3] *Medical officers*
I. C. U General Hospital (Teaching) Jaffna.

Materials

86, 793 patients were admitted to this hospital during 1986 and 1987. Out of these 869 (1% of admissions) had been cared for in the ICU. Case records of these patients were analysed to assess the bed occupancy, the types of illnesses or conditions that necessitated admissions, the demand for a particular type of service, the complications and the overall mortality.

Results

Tables 1 and 2 show, that the bed occupancy had increased from 75%. to 86%. Though there had been a slight drop in the utilization of beds by the medical units (from 78% to 60%), the surgical units had increased the bed occupancy from 8% to 23% and the paediatric units too had increased the bed occupancy from 6. 7% to 11% Allowance for the reduction in bed strength and for the period of closure of the unit was made in the calculation of bed occupancy.

Table 1

Analysis of Admissions by Units

Unit	number of patients 1986	1987	total
Medical	328	232	560
Surgical	86	95	181
Paediatric	29	34	63
Obstetrics & Gynaecology	33	21	54
Others	5	6	11
Total	481	388	869

Tabie 2

Analysis of Bed Occupancy by Units

Unit	1986	1987	mean
Medical	56.3%	45%	51%
Surgical	17.7%	22·4%	20%
Paediatric	6.8%	12.3%	9.5%
Obstetrics & Gynaecology	5.8%	2.6%	4.3%
Others	0.9%	0.5%	0.7%
Total	**87.5%**	84%	86%
100% days	2190	1602	—

Table 3 shows, that 36% admissions were due to cardio vascular disorders Acute Myocardial Infarction formed 51% and Ischaemic heart disease (IHD) 25% of these cardio-vascular disorders. Four patients in haemorrhagic shock, twenty-three in septicaemic shock and three with blood disorders were included in this category.

Table 3

Type of Illness and Its Mortality

Illness	Number of admission	Number of deaths (%)
Cardiovascular	**310**	70 (22%)
Poisoning	158	32 (20.3%)
Respiratory	43	14 (32.6%)
Neurological	108	46 (42.6%)
Renal	27	2 (7.4%)
Endocrine	14	1 (7.2%)
Hepatic failure	9	6 (66%)
Eclampsia	16	3 (18.8%)
Tetanus	30	6 (20%)
After surgery	148	61 (41.7%)
Miscellaneous	6	4 (66.7%)
Total	869	245 (28%)

Poisoning was the next commonest and if formed 18% of admissions. Organophosphate was the agent in 38%, alari seed (Thevitia peruviana) 33%, drugs 6%, miscellaneous agents in 5%

and snake venom in 18% of patients admitted with poisoning. Miscellaneous agents included mercury salts in three, kerosene oil in one, cyanide in one, alcohol in one and food poisoning in two patients.

148 patients (17%) were admitted for care after surgery. Fifty percent of these patients were after gunshot or shell blast injuries,

12% of the admissions were due to neurological disorders. Acute polyneuritis formed 28%, encephalitis 17%, poliomyelitis 11%, meningitis 10%, space occupying lesions 8%, cerebro-vascular accidents 8% and others 18% of neurological disorders. The last category included two patients with transverse myelitis, three with hypertensive encephalopathy, five in status epilepticus, one with sub-arachnoid haemorrhage, one with cavernous sinus thrombosis, three with cerebral malaria, one with parkinsonism, three with trauma to spinal cord and one with trauma to the brain.

Respiratory disorders were the cause in 5% of admissions. Only those patients with parenchymal disease or airway disease were included in this category. Bronchial asthma formed 37%, pneumonia 28%, tracheo-bronchitis & upper airway obstruction 19% and other conditions 16% of the respiratory disorders. The last category included one with pyopneumothorax, two with multiple ribs fracture and three newborns with respiratory distress syndrome. These three babies were admitted for oxygen therapy, as there was no oxygen available in the wards at that time.

Out of 27 patients (3%) with renal disorder, twenty-three were with acute renal failure, one with nephrotic syndrome, one with urinary tract infection and two with acute on chronic renal failure. Only those with primary renal disease were included in this category.

Endocrine disorders included thirteen patients with diabetic ketoacidosis and one in thyrotoxic crisis.

Six patients in the miscellaneous group included gastto intestinal bleeding (1), Rey's syndrome (1), leptospirosis (1), systemic lupus erythematosis (1), mediastinal tumour (1) and one child with diarrhoea and dehydration.

Table 4 shows that the percentage of patients treated with IPPV had increased from 18 to 29, peritoneal dialysis from 2 to 4-5 and intensive therapy from 10 to 21, when compared wtth the figures published in the first audit.

Table 4

Demand for the Type of Service

Type of Service	Number of patients
Continuous monitoring only	396 (45.6%)
Mechanical ventilation	252 (29.0%)
Intensive therapy	182 (21.0%)
Peritoneal dialysis	39 (4.5%)
Total	869 (100%)

Complications encountered were infection of the respiratory tract in 60 patients, urinary tract in 38 patients and bed sores in 14 patients. These patients were either ventilated or and on indwelling catheter for drainage of urine. The organisms cultured from tracheal swabs and catheterised urine were; pseudomonas 55%, kleb-

siella 50%, escherichia coli 50%, staphylococci 18%, proteus 3% and streptococci 3%.

The overall mortality during this period was 28% as against that of 25% reported in the first audit. Mortality related to disease showed a rate of 8.2% for IHD, 22% for myocardial infarction, 50% for rheumatic heart disease, 33% for congenital heart disease, 20% for myocarditis, 50% for haemorrhagic shock, 70% for septicaemic shock, 27% for organophosphate poisoing, 21% for alari seed poisoning, 10% for drug overdose, 100% for cyanide poisoning, 11% for snake envenomisation, 25% for status asthmaticus, 40% for pneumonia, 66% for encephalitis, 50% for poliomyelitis, 73% for meningitis, 66% for space occupying lesions of brain, 25% for cerebrovascular accident, 9% for acute renal failure, 7% for diabetic ketoacidosis, 19% for eclampsia and 57% for post-operative patients, who sustained gunshot or shell blast injuries.

Discussion

The difficulties encountered in comparing the results of two centres were stated in our first audit. As there had been no publication of results from other Intensive Care Units in Sri-Lanka, we are left with our own earlier results to make a comparative study.

The slight increase in overall mortality from 25% to 28% can be attributed to the admission of a greater number of patients with multiple injuries. The alteration in the pattern of admissions and the increase in mortality are attributable to the war-like situation, that prevailed during this period. The study of mortality rate related to disease shows that the rate had not changed significantly in acute myocardial infarction, but it had improved in most other illnesses like tetanus, diabetic ketoacidosis, renal failure and status asthmaticus. It is relevant to state here, that the unit had to manage without facilities for blood-gas analysis and serum electrolytes for a few months during this period. Despite these handicaps and the low running cost of the unit, the results indicate that the unit had done reasonably well.

Acknowledgement

Our thanks to the Director of the hospital for his permission to publish and to the Nursing Staff of the unit for their hard work.

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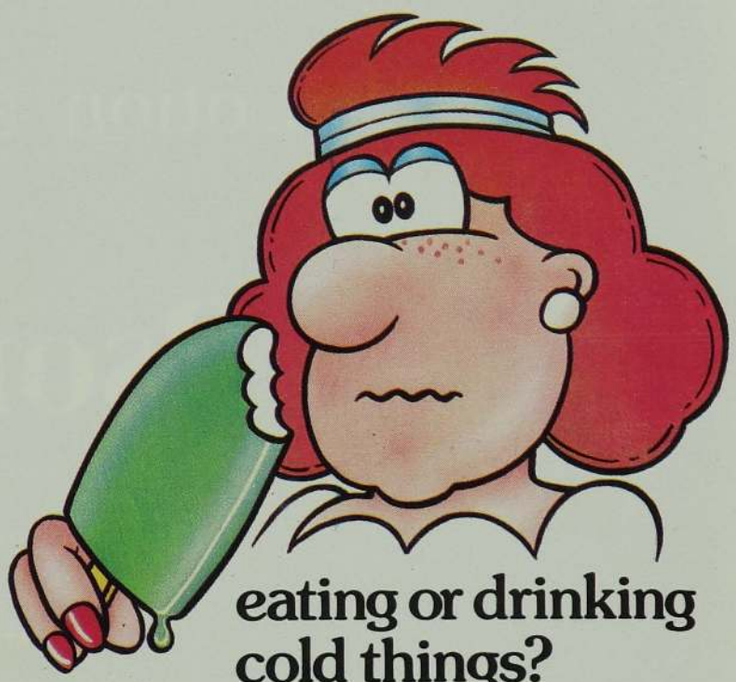

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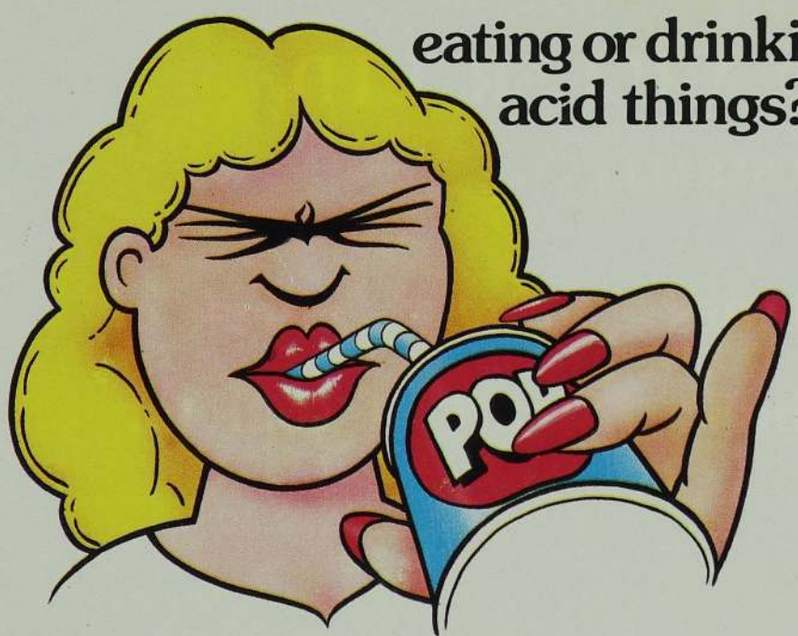

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Oral Health Problems in North-East Province of Sri Lanka

* K. Krishnaresa DDPHRCS (England)

Jaffna Medical Journal 1989, 24, 71–77

Summary

For people in the North and East the main dental problem is periodnatal disease in all, dental caries in school children, and dento facial anomalies There is a lack of School Dental Therapits and school clinics in North and East and because of this, dental health education to change the oral hygiene habits and dietary life style of people is becoming very difficult. These habits can only be cultivated in the children and it is very difficult to change in adults. There is an urgent need for dental heaith education in school children and establishment of school dental clinics in North and East. The services of an Othodentist to correct dento facial anomalies is very badly needed. The caries problem in school children should be controlled and periodental condition of the people attended to. dental profession should pay more attention to conserve the teeth rather than extract them. The people as well as the dental profession should devote more time to attend to their gingival condition and modern time saving equipments should be installed in all dental clinics to do scaling.

Introduction

This paper analyses the findings of the 1983-84 National Oral Health Survey of Sri Lanka[1] in respect of North-East Province. Children of the age of 6 years have high caries experience which is comparable to that of most western countries. However, in the adult population it is less than half of westerners. As there are no previous surveys we cannot definitely say whether there is an increase in dental caries in our population or not. However, experience shows that it is rapidly inereasing, especially in deciduous dentition of the children, and another survey will be done soon to confirm this. The survey also shows marked difference in caries experience from area to area. The entire population in Batticoloa district, and the children in Kilinochchi district have high caries incidence. Among the rest of the area, coastal areas have less caries. Trincomalee has the least caries experience.

The most alarming problem is the increase in caries prevalence over the past decade in the school children's deciduous dentition, and the deterioration of the gingival condition of all the people. More than 98% of the people show some signs of gingival disease at least in some part of their oral cavity. About a third of the people also show dento-facial anomalies which affect their appearance and functioning of the dentition. Position regarding precancerous leisons in the 35-44 year age group in also shown. Tentative explanation regarding pre-

* *Regional Dental Surgeon, Jaffna*

Table 1 : Mean number of Decayed (D), Missing (M) and Filled (F) teeth and % Edentulous in North-East Province and Sri Lanka.

District	Age and Type of Dentition	No. in the Sample	% with one or more decayed teeth	Decayed missing and filled teeth (DMFT)	Decayed teeth D (%D/DMFT)	Missing teeth M (%M/DMFT)	Filled Teeth F (%F/DMFT)	% Edentulous
Jaffna and Kilinochchi	6 year Deciduous	158	67	3.6	3.4(94.4)	0.2(5.6)	0	—
	6 year Permanent	158	22	0.4	0.4	0	0	—
	12 year Permanent	158	65	2.1	2	0.1	0	—
	34—44 Yr. Permanent	158	89	7.9	3.9(49.4)	3.8(48.1)	0.2(2.5)	0.6
Trincomalee	6 Year Deciduous	40	73	3.3	3.3(100)	0	0	—
	6 Yecr Permanent	40	10	0.1	0.1	0	0	—
	12 Year Permanent	34	41	0.7	0.7	0	0	—
	35—44 Yr. Permanent	39	90	6.8	3.5(51.3)	3.3(48.5)	0(0%)	0
Batticaloa	6 Year Deciduous	39	80	4.6	4.2(91.5)	0,4(8.76)	0(0%)	—
	6 Year Permanent	39	13	0.2	0.2	0	9	—
	12 Year Permanent	30	87	2.6	2.3	0.3	0	—
	35—44 Yr. Permanent	40	90	13.7	5.5(40.1)	8(58.4)	0.2(1.5)	7.5
North and East Province	6 Year Deciduous	237	70	3.7	3.5(94.1)	0.2(5.4)	0(0%)	—
	6 Year Parmanent	237	18.6	0.32	0.3(100)	0(0%)	0(0%)	—
	12 Year Permanent	222	64.6	1.95	1.84(94.4)	0.1(5.6)	0(0%)	—
	35—44 Yr. Permanent	237	89	8.7	4,1(47·1)	4.4(50.1)	0.17(1.95)	1.66
Sri Lanka	6 Year Deciduous	1868	78	4.4	4(90.9)	0.3(6.8)	0.1(2.3)	—
	6 Year Permanent	1868	14	0.2	0.2(100)	0(0%)	0(0%)	—
	12 Yeer Permanent	1842	67	1.9	1.7(89.4)	0.1(5.3)	0.1(5.3)	—
	35—44 Yr. Permanent	1863	92	9.2	3.7(40.2)	5.2(56.6)	0.3(8.26)	1.1

sent position, demand and type of treatment met in the North are discussed.

Only 6 years, 12 years and 35-44 years old people were selected as indicators of deciduous, mixed or early stage of permanent dentition and permanent dentition respectively. Further comparable international data are available for these age groups. Random sampling for children and cluster sampling in randomly selected areas were used for adults. Samples were from Valvettiturai, Kayts, Karainagar, Vadduccoddai and Jaffna (in Jaffna district) Seruwila (in Trincomalee district) and in Kilinochchi and Batticaloa district.

Results and Discussion :

I. Dental Caries :

The noteworthy observations from Table 1 are as follows:

1. North-East Province has less caries in 6 year deciduous dentition, and 35-44 year age group when compared to Sri Lanka but the difference is not statistically significant. However, the 6 year's permanent teeth show more caries. 6 year's caries experience is the same as that of 5 year old in U. K. and most western countries, which are supposed to have high caries rate, 89% of adults and at least 64.6% of School children have dental caries in North and East.
2. There is marked difference in caries Incidence from area to area. Interdistrict wise, people in Batticaloa have high caries prevalence and Trincomalee the least. In the 35-44 year age group the Trincomalee district has less than half caries experience of people in Batticaloa district. Intra-districtwise in Jaffna district Vaddukoddai, Karainagar, Valvettiturai have less caries in school children. However in adults, Kayts (10.4 DMFT), Valvettiturai (8.1 DMFT) have high caries compared to Jaffna town (5.5). The chilldren age 6 years in Kilinochchi have the highest (6.25 DMFT) caries In their age group in North-East.
3. Utilisation pattern of Dental Services in North-East shows marked difference when compared with western countries.
   (a) In the children, 94.5% of dental caries remain untreated as decayed teeth. Only 5.5% is treated and that too with extraction and not conservation.
   (b) Among adults in North-East, out of 8.7 DMFT 47% (or 4.1 teeth) remain untreated as decayed teeth, 50.9% (or 4.4 teeth) treated with extraction and only 1.95% (or 0.17 teeth) is treated with conservation. This shows for every 26 teeth extracted only one is filled in North and East while in western countries percentage of filled teeth is comparatively very high (ranges from 50% - 75%)

Further, when out-put of work in the hospital clinics in Jaffna and Kilinochchi district from 83 Jan. - 88 Dec. is analysed only 7.3% of the people attend dental clinic for the 1st time and about 11% of the total population only attend a dental clinic in any one year. 79.6% of proce-

dures done in hospital dental clinics in Sri Lanka are extractions while only 4.5% are permanent filling. 80% of extractions are done for dental caries in Sri Lanka. In the Jaffna and Kilinochchi district (in 1983-88), 73.4% of dental procedures were extractions and 69.9% of the extractions were due to dental caries and 26.7% of the extractions are were to paradontal (Gum) disease. Only 4.7% of the procedures done in clinics are permanent filling and 9.3% scalings.

In Jaffna and Killinochchi disirict, of the people attending dental clinics 56.6% got extractions done, 3 6% permanent filling, 8. 2% temporary fillings and 7. 2% got scaling done. There is lack of restorative care and both consumer as well as provider of treatment had to be blamed for this sad state of affairs.

Discussion:

Dental caries is the major cause for tooth loss in our populat on and especially so up to the age of about 35 years. Diseass shows variation with age, locality etc. The variation is mainly due to cultue— linked dictary practice and life style, unfailingiy associated with sophisticated western Communities-the consumption of large amounts of refined fermentable carbohydrates mainly in the form of sugar, snacks, or sweets biscuits etc. frequently in-between meals. Severity of dental caries is more in deciduous dentition because it is this age group which consume more sweets sugar etc. The school children generally tend to live with dental caries or else the carius teeth are extracted and not conserved. This is mainly due to lack of awareness and knowledge among our people about the importance of declduous dentition and lack of school clinics. However, in adults 50% of the need is met with extraction, and only 1. 95% of the need met with conservation

Table 2; Percentage of people with, healthy gingiva (gums), gingivitis, calculus and pockets.

District	Age	No. in the sample	% with no disease	% with gingivitis only	% with calculus	% with pocket
Jaffna and	12 Yrs.	159	2	13	81	4
Kilinochchi	35-44	158	2	1	61	34
Trincomalee	12 Yrs.	35	3	9	89	0
	35-44	40	0	0	48	53
Batticaloa	12 Yrs.	30	0	7	93	0
	35-44	40	3	0	48	43
North and	12 Yrs	224	1. 6	9. 6	87. 6	1. 3
East	35-44	238	1. 7	0. 3	52. 3	43. 3
Sri Lanka	12 Yrs.	1850	12	1	76	3
	35-44	1867	5	1	55	37

Periodontal (gum) Disease:

This is a chronic disease which ultimately leads to tooth loss. However tooth loss takes a long time and generally most people loose their teeth after about 30 years or more 98% of people show some sign of this disease. This is a very high figure and the pattern is same in most under developed countries. In Sri Lanka, Tamils have the highest incidence of periodontal disease and the main reoson that could be attributed to this is their oral hygiene methods. Percentage of people using tooth brush is very low but however our forefathers had better gingival conditions when they used wood sticks like margosa etc. for cleaning their teeth.

Table 3 shows mean number of segments with bleeding (Gingivitis), Calculus (Tartar) and pockets and traatment need. Mouth cavity is divided into 6 segments 3 in upper jaw, 3 in lower jaw. Anterior teeth (canine & incisors) forms one segment and posterior teeth (Premolar & Molars) on right and left side constitute the other two segments in each jaw.

Table 3 : Segments and percentage needing therapy

	No. of segments with bleeding	No. of segments with calculus	No. of segments with pockets	% needing oral hygiene instruction	% needing prophylaxis (segments)	% needing (surgery (segments)
12 Year old in North and East	4. 35	2. 98	0. 07	98. 2	85.3 (2.98)	0. (0)
12 Year old in Sri Lanka	3. 7	2. 6	0	87	79 (2. 6)	0 (0)
35-44 Year in North-East	5. 07	4. 95	0. 88	95. 6	95.6 (4.95)	10(0.17)
35-44 Yrs. in Sri Lanka	4. 4	4. 2	1. 1	93	92 (4.2)	10 (0.2)

The proplem in the North and East are

1. Bleeding.

In school children 4. 35 segments out of 6 segments in the mouth showed signs of ginigivitis and in adults 5. 07 sements out of 6 showed signs of gingivitis (bleeding)

2. Calculus

2. 98 segments out of 6 in schools children and 4. 95 segment out of 6 in adults showed calculus.

3. Pocketing

0. 07 segment in school children and 0. 88 segment in adults showed pocketing.

In all above aspects North and East figures are higher than that of Sri Lanka.

Treatment need

98.2% of students and 95.6% of adults needed proper oral hygiene instructions. 85.3% of students and 95.6% of adults needed scaling and polishing (prophylaxis) to remove calculus present. 10% of adults needed sugery to correct their gingival conditions.

Utilisation of hospital services

Only 8932 scalings were done in hospital dental clinics in North and East in 1988 and this is only 0.35% of our population, where as need was there in at last 95.6% of adult and 85.3% of school children. Lack of damand for periodontal care is due to false beliefs in our people and coupled with the fact that the tooth mortality comes generally after third decade of their life, after their marriage, when they consider the mortality of teeth as inevitable and accept it. However, if they adapt effecient oral hygiene methods they will have their teeth at least up to their late stage of life.

Dento Facial Anomalies

Table 4 shows number and % of people with dentofacial anomalies (DFA) in 12 years and 35-44 years in North East Province and Sri Lanka.

Table 4 : Dentofacial Anomalies among 12 years and 35–44 age groups in N-E Province

	12 Years			35-44 Years		
	No. in sample	No. with dento-facial anomaly (DFA)	%	No. in sample	No. with DFA	%
Trincomalee	40	0	0	40	0	0
Batticoloa	30	13	43.3	40	7	17.5
Jaffna	160	53	33.1	160	38	23.75
North & East Province	230	66	28.7	240	45	18.75
Sri Lanka	1867	335	17.9	1921	80	4.2

Tamils have more dento facial anomalies than other ethnic groups and this is more in Jaffna and Batticaloa district school children and adults. As the table 4 shows the difference between North East (excluding Trincomalee) and Sri Lanka is of statistical singificance, 34% of the adults and 98% of children affectd in Jaffna district needed treatment to correct this anomaly and no treatment facility is available in any hospital dental clinic here.

Precancerous leisons

Table 5 : Number of people with precancerous leisons in 35 - 44 year old people.

Place	No. in Sample	No. with Leukoplakia	%
Trincomalee	40	0	0
Kilinochchi and Jaffna	160	1	0. 625
Batticaloa	40	1	2. 5
North-East	240	2	0. 83
Sri Lanka	1921	20	1. 04

Table 5 shows the position with regard to precancerous leisons in North and East. However this age group is not a suitable one to indicate this disease as it comes often later than this age. Here again the note worthy observations is absence of this in Trincomalee district. However the sample is too small to decide.

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An Apology

The name of Dr. S. S. Senathirajah had been inadvertently omitted from the list life of members published in the June 1989 issue of the Jaffna Medical Journal.

In fact, enrolment of life members was started during his tenure of office as President of the JMA and he was one of the inital life members enrolled.

We apoloigse for the omission.

Editor

Abnormal lipid levels raise the risk of coronary heart disease

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INDICATIONS

1. Primary prevention of coronary heart disease (CHD) and myocardial infarction (M1) in patients with hypercholesterolemia mixed dyslipidemia and hypertriglyceridemia, Fredrickson's classification Types 11a, 11b and IV respectively.

2. Treatment of other dyslipidemias :
   a. Fredrickson types III and V
   b. Associated with diabetes
   C. Associated with xanthomata

CONTRAINDICATIONS

Lopid is contraindicated in patients with severe hepatic or renal dysfunction' gallbladder disease, and patients who are hypersensitive to LOPID.

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Re-infestation of intestinal nematodes in a peri-urban population

[1] C. Nageswaran MBBS [2] N. Sivarajah MBBS, DTPH, MD

Jaffna Medical Journal 1989, 24, 81–84

Summary

Seventy two children under 15 years of age having parasitic infestation with intestinal nematodes, were treated with 500 mg mebendezole. Among them 62 children with no evidence of infestation in the specimens of stools were followed up for 5 months, By 3 months, 38. 7% of the children were reinfested, by 4 months 61. 3% were reinfested and by the end of the 5 th month 75. 8% were reinfested.

Introduction

Intestinal nematodes is a common problem in Sri Lanka. (1, 2, 3, 4) This is due to poor socioeconomic conditions, unhygienic environment and poor knowledge regarding health. If left untreated the infested persons could develop malnutrition, anaemia and other complications.

The infestation could be controlled by health education, personal hygiene, improvement in environmental conditions and intermittent drug therapy. The frequency of drug therapy will depend on the re-infestation rate. The re-infestation rate varies, from place to place, depending on the soil pollution and personal habits of the population. This study was undertaken to find the re-infestation rate in a peri-urban area in Jaffna following antihelmintic therapy.

Methodology

One hundred and twelve children from Kokuvil Kondavil community health project area were selected for this study, All these children were under 15 years. These children belonged to the families allocated to third year medical students carrying out their family health project. With the help of the medical students, the stool specimens were obtained from these children and examined at the Division of Parasitology, Faculty of Medicine. The specimens were examined by using direct saline and iodine smear and after formol ether concentration. The peri-anal swab of these childran were examined for the presence of thread worm ova.

The children who had ova of any intestinal nematodes were given a single dose (500mg) of mebendazole. The drug was administered under the personal supervision of the medical students concerned.

A second specimen of stool from the treated children was examined by

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[2] *Head Department of Community Medicine. Faculty of Medicine, University of Jaffna.*

the same method, about 2-3 weeks after treatment. Those children who were found to have ova in their stools were given a 2nd dose of 500mg, mebendazole, and stools re-examined again 2-3 weeks later.

The children who were found to have no ova in their stools either after the 1st dose or 2nd dose of mebendazole constituted the ultimate study group. The children who continued to have ova in their stool were not include in the study.

Results:

Among the 112 children initially selected for the study 72 showed one or more parasitic infestation with intestinal nematodes. Six children were lost to follow up and were excluded from the study.

Out of the balance 66 children, 4 childaen did not respond to 2 doses of mebendazole and were also excluded from the study. The final study population was 62 children.

The nnmber of children infested with intestinal nematodes is given in Table1.

Table 1
Intestinal nematode infestation among children prior to treatment

Intestinal nematodes	Number	%
Round worm	45	62.5
Hook worm	23	31.9
Whip worm	43	59.7
Thread worm	12	16.7

Table 2 shows the children reinfested during the follow up period. At 2 months, 18 children were reinfested, which constituted 29% of the study population. Among the 18 children 6 children had double infestation and 12 children had single infestation Majority of the single infestations were with whip worm (7) and double infestation were with whip worm and hook worm (5). At 3 months 6 other children became infested given the total of 24, which is 38.7% of the study population.

Table 2
Reinfestation of children during follow up

	Number infested	% infested	Children with		
			Single infestation	Double Infestation	Triple infestation
At commencement of study	Nil	0	0	0	0
At 2 Months	18	29.0	12	6	0
At 3 Months	24	38.7	16	8	0
At 4 Months	38	61.3	23	14	1
At 5 Months	47	75.8	15	25	7

Among the 24 children 16 had single infestation and 8 had double infestation. At 4 months 14 more children became reinfested giving the total of 38 which is 61.3% of the study group.

At 5th months total reinfestad children were 47 which is 75. 8% of the study group. Among them 15 had single infestation, 25 children had double infestation and 7 children had triple infestation.

Discussion:

Control of intestinal nematode infesetation involves health education interference with environment and antihelmintic drug treatment. S. P. Kan in 1983([5]) showed that the prevalence of intestinal helmintic infestations could be reduced in urban slums, semi urban area and rural areas in Malaysia, by half to two thirds in 5 years by giving yearly antihelmintic treatment alone, using mebendazole only without interfering with environment.

Our study shows that the infestation re-appears very early after antihelmintic treatment. By 4 months more than 50% of the children treated had one or more nematode infestations and by 5 months over 75% had infestations. Therefore in our community mebendazole treatment alone cannot be expected to give, significant long term reduction in the prevalence of helmintic infestations. Health education regarding personal hygiene and improvement in the living conditions should go hand in hand to achieve reduction in the prevalence of nematode infestations.

This study shows that hookworm and whip worm infestation re-appear sooner than roundworm. According to the life cycle hookworm infestation would take ronghly 1-2 months to appear in the stools of a person who gets infested by the larva in the soil, But whip worm infestation should take over 3 months along with the round worm to re-appear in the stools The observation that whip worm appeared earlier than round worm points to the possibility that mebendazole had not effectively eradicated whip worm. S. P. Kan of Malaysia ([6]) noted that the cure rate of whip worm. infestation with a single does of mebendazole varied from 7. 1%-61.9% depending on the severity of the infestation, whereas for round worm the cure rate was closer to 100%. As such, the late appearance of round worm ova in stool was probably due to pure re-infestations where as the early appearance of whip worm was probably because the single dose of mebendazole did not produce complete cure in all those treated, but only reduced the worm load.

In view of the observation that over half of subjects showed re-infestation by one or more nematodes at 4 months, if antihelmintic treafment alone is to be administered. it has to be given at least every four months.

Acknowledgements:

The authors wish to thank the medical students who helped in collection of specimens and in the treatment of children selected for this study. They also would like to thank Mr. S. M. Cumara Rajan, Technician and other laboratory staff in the division of Parasitology and Microbiology for their assistance in the examination of specimens.

Financial assistance was provided by the Thillaiampalam—Kanagasabai fund of the Faculty of Medicine, University of Jaffna.

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Abstracts of papers read at the

Seventh Annual Scientific Sessions of The Jaffna Medical Association

19th, 20th, 21st May 1989

Chief Guest

Prof. V. K. GANESALINGAM

B. Sc. (Cey.), M. Sc., (Hawaii), Ph. D. (Lond)

Professor of Zoology & Dean, Faculty of Science,

UNIVERSITY OF JAFFNA.

Jaffna Medical Journal 1989, 24, 85 - 97

Effects of Gymnema sylvestre on Diabetics.

[1]S. Anushiyanthan [1]N. Mugunthan [2]A Nageswaran

[3]V. Arasaratnam & [3]K. Balasubramaniam

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Correspondence To:- Professor K. Balasubramaniam,
Dept. of Biochemistry, Faculty of Medicine,
University of Jaffna.

The effect of Gymnema sylvestre (T. Sirukurincha) in 16 normals and in 36 mild diabetics in the age group of 40—60 was studied. All the subjects were administered with Gymnema sylvestre leaf powder (10g/day) for 7 days and from the 8th day the diabetics were allowed to take tolbutamide for one week as prescribed by their doctors. The fasting blood glucose levels on O. 7 and 14 days were measured. The fasting flood glucose level significantly decreased 7 days after the administration of Gymnema Sylvestre leaf powder The fasting brood glucose levels of 7th and 14th days showed no significant difference. this indicates that the Gymnema Sylvestre leef powder has probably had a rypoglycaemlc effect as tolbutamide. Serum triglyceride, free faty acld and cholesterol levels of normals were uneffected by the intake of Gymneme Sylvestra whereas that of diabetics have significantly decreased. The serum ascorbic acid and Fe levels of normels were elevated significantly due to the intake of Gymnema sylvestre leaf powder. Intake of Gymnema sylvestre has not effected the excretion of creatine in normals, whereas in diabetics it has decreased the excretion of creatine. The Gymnema Sylvestre was found to be non-toxibc and this was confirmed by the estimation of SGOT & SGPT levels of normals and diabetics before and after administration of Gymnema sylvestre leaf powder.

The effectiveness of small dose intradermal rabies vaccine.

D. Ramadas*, K. Black* and A. Sathasivam+
*Department of Paediatrics, University of Jaffna.
+Medical Research Institute, Colombo.

Rabies is potentially a fatal disease. It is common especially in this part of Sri Lanka.

HDCV (Human Diploid Cell Vaccine). is an effective vaccine. The manufacturer's recommended dose for pre—exposure prophylaxis is I ml. vaccine on days O, 7 and 28 given intramuscularly with boosters every two years. The cost of vaccine is exorbitant.

61 volunteers from among the hospital staff and their families were given 2 dose of 0. 1ml. of the vaccine intradermally on day 0 and 28 with no side effects.

Blood samples for antibody determination was obtained from 40 of them on day 56. The antibody titre was measured by Rapid Flourescent Focus Inhibition Test.

38 of the 40 blood samples were shown to have sufficient titre. Sera containing more than 0.3 international units per ml of antibody were considered sufficient for protection. This corresponds to a titre of 1 : 16 and above. The 2 volunteers who failed to develop adequate antibody was perhaps due to a leak at the injection site or as a result of a fair amount being given subcutancousiy.

The principal benifits of these pre-exposure prophylaxis are:-

i) It is very economical
ii) It simplifies the post-exposure therapy by eliminating the need for globulin and decreasing the number of doses cf vaccine.
iii) It may protect persons whose post-exposure therapy might be expected to be deyaled.

Mortality from coronary heart disease in the Jaffna Municipal population.

A. Nageswaran A. Ravindran
Department of Medicine, University of Jaffna

The number of deaths from Coronary Heart Disease (CHD) in the Jaffna Municapl area for the year 1986 was 63 giving a mortality rate of 53.3 per 100,000 population. The male: female ratio of deaths from CHD is 2. 9: 1. 31.7% of deaths occured at home or before reaching Hospital.

Most number of deaths occured in the 61-70 year age group in both sexes. 42-5% of deaths among males and only 18.7% of deaths among females occured before 60 years of age. Information obtained from the relatives of the deceased (response rate was 76. 2%) revealed that out of the hospital deaths, 29.8% died within the first 12 hours of admission 50% had been indentified to have had CHD before death 51.5% of males and 40% of famales had been hypertensives 33.3% of males and 35.3% of females; had been diabetics, and 69.7% males had been smokers. All the patients except one below the age of 55 yrs who died of CHD were smokers.

An unusual bladder calculus investigated

T. Saravanapavananthan
Professor of Pharmacology University of Jaffna

A 28 year old male who presented with symptoms of recurrent lower urinary tract infection had a bladder calculus with an unusual foreign body. The nature of the calculus was inferred by an analysis of the urine and confirmed by analysis of the stone after operation.

Simple renal cysts - Our experience

V. Karunanathan[1] S. Selvakumaran[2] M. Sithamparanathan[3]
[1]. Professor of Surgery [2]. Assistant Surgeon [3]. Registrar
University surgical unit, Teaching Hospital, Jaffna.

Simple renal cysts are frequently detected on ultrasonographic scans. The diagnosis is relatively simple in most instances. A percutaneous ultrasound guided cyst puncture not only helps in confirmation of the diagnosis but also helps to relieve pain, which is a predominant symptom. The asymptomatic patient with a simple cyst should be left alone.

When the symptoms presist inspite of aspiration, even if the findings are conclusive of a simple cyst an explorat on and removal of the lesion clears the doubts in the patient's mind. When the findings are equivocal even if the patient is happy, an exploration is indicated. Our experience in managing five patients with simple renal cysts, in the University Surgical Unit at the General Hospital (Teaching) Jaffna is discussed.

Deaths in the Kokuvil-Kondavil Community Health Project (KKCHP) In 1987

N. Sivarajah, S. Sivayogan, J. Jegatheesan & S. Sivapragasam.
Department of Community Medicine, University of Jaffna.

The KKCHP area was severely affected during the military operations by the Indian peace Keeping Force (IPKF) in October - December 1987. There were several deaths in the area and this study was carried out to quantify the deaths, identify the causes and the extent of death registration.

426 deaths were reported in the area. 89.2% of them were inveatigated. Out of the total deaths during

the year, 82.1% occurred during Oct-Dec 1987. 69.0% of the deaths investigated were due to firearms or shell blast injuries. 73.2% of all deaths were registered, but only 19% of the infant deaths were registered.

The age specific death rates, causes of death and registration are discussed, in the paper.

Breech Delivery.

(A Two Year Study)

J. Mahadeva, M. Gunaratnam and K. Somasekarampillai
General Hospital (Teaching) Jaffna.

Singleton breech deliveries that occurred in one of the three Obstetric Units at the Teaching Hospital - Jaffna were studied. The incidence was 2.42%. 90.63% had a aginal delivery and 9.37% a Caesarian delivery. There were no maternal deaths but the perinatal mortality rate was very high 28.12%. The high perinatal mortality rate and how it could be lowered are discussed.

BCG scars among children

N. Sivarajah S. Sivayogan J. Jegatheesan and V. Gnanananthan

The succese of BCG immunization is considered to be the development of a scar 6-8 weeks later at the site of immunization.

This study was carried out to ascertain the proportion of infants developing a scar following BCG immunization. All children registered by the Family Health Workers in the Kokuvil-Kondavil Community Health Project Area were included in the study. The response rate was 73%. Out of the infants interviewed 75% had the BCG within 24 hours after birth, before leaving hospital.

Out of the 719 infants immunized within 24 hrs, 17.1% did not develop a scar and out of the 257 infants immunised after 24 hrs. at Child Welfare Clinics 5% did not develop a scar.

This paper discusses the causes for non-immunization and lack of scar formation.

Role of the Counselling centre in Jaffna,

R. Shivashankar
Association for Health & Counselling, "Shanthiham"
21, First Cross Street, Jaffna.

Counselling in some way or another has been used by different people since the beginning of mankind. Those who took it more steadily are Medical Practitioners or the Family doctors.

This was then enhanced by Freud, who discovered what goes today by the name of psychotherapy as counselling. A great pioneer in the forties was Carl R. Rogers, He was a pioneer in doing scientific research in the process of helping.

Counselling is not giving advice or suggestion, but to maintain a growth stimulating reationship and to make the client as a fully functioning person. Every person can be helped through the counseiling process.

The six years of violent ethnic conflict in the North & East of Sri Lanka has resulted in loss of life, property and livelihood for many. The effect had been an overall disruption of the society which has lead to an increased incidence of behavioural disorder and stress related illnesses.

Inevitably these lead to the necessity for psychological help in this area. Upto now the only mental health support that people can turn to is the psychiatric services provided at the General Hospital. There has been an increase in the number of patients seeking psychiatric treatment at Teaching Hospital Jaffna and Tellipallai during the past one year. Furthermore, the number of suicides and attempted suicide or deliberate self harm has been on the increase.

All these highlight a real need for non-medical intervention at the conselling level and such services are not available as yet in North Sri Lanka. To meet these needs, the Association for Health & Counselling was started in August 1988 and Conselling Centre "SHANTHIHAM" was srarted in September of that year.

Its main objectives are:-

a) To assist persons who are in distress, despairing or suicidal by providing a counselling service.

b) To conduct training programmes in Counselling & Befriending. so far we have handled and treated 169 clients.

An Analysis of patients admitted with poisoning to a General Hospital (Teaching) - Jaffna - A two year Study

M. Sritharan
Medical Officer, Intensive Care Unit, General Hospital (Teaching) Jaffna.

A previous study in 1983 on acute poisoning revealed an incidence of 0.8% among the patients admitted to General Hospital (Teaching) Jaffna. An analysis of patients admitted with poisoning to this Hospital during 1987-1988 was undertaken to estimate the incidence, the spectrum of poisoning and the mortality

This study revealed an incidence of 0.9% for acute poisoning. Out of these "alary seeds" formed 32.1%, organophosphates 22.5%, unidentified poisons 19.6%, drugs 17.2% and others 8.3% among these patients.

The overall mortatity in the previous study was 7%. In this study the mortality is 6.6%. In this study envenomisation is catagorized seperately, whereas in the 1983 study envenomination was included in the poisoning category.

During these two years 218 patients were admitted with envenomistion and out of these 172 (18.9%) were due to snake bite, If the patients with envenomisation were included in the poisoning category the incidence will rise to 1.1% and the mortality will decrease to 6.0%.

This study shows that the overall mortality has been reduced by 1% inspite of a slight increase in the incidence of poisoning during the past 5 years, This reduction is attributed to the establishment of an Intensive Care Unit in this Hospital in 1984.

A preliminary study on the use of Gymnema Sylvestr In the reduction of menorrhagia.

N. Jeyasakthy, S. V. Parameswaran and K. Balasubramaniam.

Ten subjects with menorrhagia due to dysfunctional uterine bleeding were given Gymnema Sylvestre as an alternative apprcach in an attempt to reduce their excessive menstrual blood loss.

Gymnema Sylvestre given to them during menstruation, reduced the menstrual blood flow in all subjects except one. The preliminary observation suggests a possible new treatment for a common gynaecological problem.

A Systemic treatment for Pediculosis

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Systemic treatment with co-trimoxazole given in two doses at an interval of 8 days was found to be effective in the treatment of head lice. 187 inmates of 3 orphanages were treated with systemic co-trimoxazole for pediculosis. It was found to be curative in 85% and in 15% it was not curative.

Nerve supply of the human Vastus Medialis muscle

Rajani Thiranagama
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University of Jaffna, Sri Lanka.

The dissection of 30 human vastus medialis muscles and their nerves revealed a consistant bipartite nerve supply from the posterior division of the femoral nerve. One part, a short and slender nerve termed the lateral branch, supplied the upper lateral portion of the muscle. The other part, a medial branch, supplied the middle and lower portion of the muscle. There was a distalward increase in the numbers of nerve fibres supplying the muscle, with the lower-most muscle fibres receiving the richest nerve supply. The gross structure of the muscle, together with the evidence from the pattern of innervation, indicates that the human vastus medialis is tripartitie.

The tracing of the two nerves of the vastus medialis to the lumbar plexus in three human disseetions showed that the lateral branch received fibres from lower segments of the femoral nerve roots while the medial branch, which supplied the middle and lower parts of the muscle, received its fibres from higher segments of the lumbar spinal column. The lateral branch, which in some cases arose from the nerve that supplied the vastus intermedius, received a similar spinal input to that of the vastus intermedius. Therefore the upper pertion of the muscle is closely aligned with vastus intermedius, as shown by its peripheral and segmental innervation. In the tripartite division of vastue medialis the lower third of the muscle was distinguished by unique features. This portion not only had a richer innervation but also showed a distinct gross morphology that, among primates is confined is humans.

Epidural Anaesthesia Vs. General Anaesthesia for planned Caesarien section

A Preliminary Study

A. Sripathy R. Sivan Wijayasegaran T. Vigneswaran L. Kumarasamy and M. L. Wijayaratnam

General Hospital (Teaching) Jaffna.

In a climate of acute shortage of anaesthetic gases, which often occured in the recent past we were compelled to resort to regional anaesthesia wherever possible. During that period we encountered a high degree of reluctance on the part of mothers to accept Epidural anaesthesia (EDA) for Caesarian section. This and the fact that there are other advantages of EDA, prompted us to undertake this study. When a reasonable supply of Anaesthetic gases was restored, we had then the opportunity to give them the choice, after they acquired adequate information regarding both techniques: i.e Epidural Anaesthesia (EDA) & General Anaesthesia (GA).

84 mothers fixed for planned Casaerian section during the period July 1988 - March '89 were studied. 50 (59.5%) accepted EDA. 34 had previously experienced GA for Caesarian section.

An Analysis of intraoperative problems showed a higher incidence in EDA group. (52%) compared to the GA group (17.6%). Though 45 patients of the EDA group rated their experience as satisfactory. only 27 (32%) preferred an EDA in the future.

25 patients in the EDA group had not previously experienced GA. Of them 16 (64%) desired an EDA in the future & 11 (44%) of the balance 25 with previous GA experience preferred EDA. It is likely that their previous experiance influenced their preference.

The main factors influencing the drop from the overall acceptance rate of 59.5% to a preference rate of 32% were the desire to sleep through out surgery and the discouraging incidence of intraoperative problems.

Lack of information about EDA also influenced acceptance rates. Measures to be adopted to improve acceptance & preference are discussed.

Pattern of parasites in a Paediatric ward.

G. Ramadas*, D. Ramadas+, & Medical Student-
* Division of Parasitology Dept. of Pathology
University of Jaffna.
+ Dept of Paediatric
General Hospital Teaching, Jaffna
- Medical Students, 1982 Batch (Group 1)
University of Jaffna.

Children admitted to the University Paediatric Ward, General Hospital (Teaching) Jaffna were studied for the parasites affecting them. The study was done for the Month of April 1989. There were 187 children; 105 males and 82 females. They were of the ages 2 to 12 years and all were admissions for various illnesses,

They were clinically examined for ectoparsites like sacroptes and pediculosis. Their stools were collected to study the presence of amoeba giardia, ova of the parasites and cysts. A stool concentration test was done (with formal ether) to confirm mild infection

The blood film of each child was examined for malarial parasites.

84 of the children (44.9%) had intestinal parasites.

50 (59.5%) of them had at least on paraaite and 34 (40.5%) of them had multiple infection. 39 of them (20.8%) had intestinal protozoans. They were giardia 25 (13.4%) Ecoli 7 (3.7%) E. histolytica 5 (2.7%) Balantidium coli (0.5%) and mixed infection 1 (0.5%). Intestinal helminthiasis wes found in 80 (42.8%). They were round worm ova in 28 (15%) hookworm ova 23 (13.3%) whip worm ova 25 (13.4%) adult thread worm in 1 (0.5%) & strongyloides larva in 3 (1.6%).

Sarcoptes scabiei was found in 13 children (7%) and pediculosis in 72 (38.5%); 45 of them girls, in the blood, malarial parasites were present in 2 (1.1%) & both were plasmodium vivax.

126 children (67.4%) had at least one parasite in them. 182 children (97.5%) did not come to the hospital because of the parasitic problem. One child (0.5%) with fever, had malarial parasites in the blood. In four of them with gastroenteritis 2 had giardia & 2 had amoeba; these like any other pathogen could have been the aetiological agent.

In conclusion, parasites are common in paediatric practice. Often they are not directly related to the illness for which the child is brought to the hospital but may be of nuisance.

Study of ex-detainees in the district of Vavuniya.

S. A. Puvinathan Hema Shanmugarajah, M. Lakshman, Anna Doney.

In our study of ex-detainees, which may be the first such study in Sri Lanka, we found that 85% of the victims were suffering from Post Traumatic stress Disorder (DSM 111). These indiviuals had undergone methods of physical and psychological torturing during their detentlon period. Most of the physical methods of forturing ultimately lead to psychological trauma and its sequalee. Most suffer from chronic anxiety, depression, loss of trust and this often leads to severe sleep disturbance and sometimes to thoughts of suicide.

The aim of the paper is to give a quantitative and qualitative assessment of long term phychological, psychosomatic and physical complaints found in torture victims. The work gives some insight into common symptoms and suggests possible therapies and rehabilitation procedures.

This study was conducted in 160 ex-detainees in the District of Vavuniya. The age distribution was 16-66 yrs. The average age was 21-25, and only 2 out of the 160 were females. The period of deteneion was an average of 13 months, and almost all spent atleast part of this period detained in Boosa Military Prison. The subjects were required to fill out a questionaire and this was followed up by a lengthy talk with each person during which various details were obtained and explored.

They were suffering from various phychological, psychosomatic and physical problems as follows:

1. Psychological:

(a)	Anxiety symptoms	85%
(b)	Recurrent intrussive painful memories	83%
(c)	Memory impairment & poor concentration	76%
(d)	Depressive symptoms	69%
(e)	Intensification of symptoms when reminded of the trauma	68%
(f)	Sleep disturbance	63%
(g)	Low self esteem	59%
(h)	Abnormal mistrust and suspiciousness	50%
(i)	Anger & agressiveness	46%
(j)	Behavaioural personality change & social withdrawal	38%
(k)	Sexual dysfunction (mainly pre-mature ejaculation)	25%

2. Psychosomatic / Psysical Problems

(a)	Chronic headache	95%
(b)	Vision problems	55%
(c)	Skin diseases	55%
(d)	Chest pain	55%
(e)	Impaired hearing	34%
(f)	Aches & pains in the limbs	29%

Those who required Specialist Medical attention were referred through DMO Vavuniya to Jaffna Teaching Hospital and money was made available for their travel and daily expenses through the Association for Health Counselling. They could also get help for their psychological problems at the Association's Counselling Centre, "SHANTHIHAM," at Ist Cross Street Jaffna.

This study was supervised by the Association for Health and Counsel ing.

Effects of Heroin addiction on Serum Cholesterol, Triglyceride and P.otein Levels and a study on AiD9 susceptibility among the addicts'

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Twenty seven heroin addicts and non addicts from Jaffna Municipality and suburbs were chosen randomly. They were all males in the age group of 20-30 yrs. The heroin addicts and non-addicts had a mean age of 26. 8 yrs (±5. 5) and 25. 8 yrs (±8. 6) respectively. Of the 27 addicts, 57% take heroin intravenously and 44% have reported that they learnt to take drugs when they were abroad. The price per 100 mg was SLR 35/= and it is a blackish brown powder indicating that these samples are not pure heroin. The mean serum cholesterol level of heroin addicts and that of the normal were 520 mg dl^{-1} (± 125. 3) and 265 mg dl^{-1} (±44) respectively. The statistical analysis shows that elevation in serum cholesterol level in heroin addicts was highly significant ($P < 0.001$). When the mean serum trig lyceride levels of heroin addicts and of normals were determind, they were 396. 9 mg dl^{-1} (±244. 7) and 156. 6 mg dl^{-1} (±62. 9) respectively. This incerease in triglyceride levels of the heroin addicts was found to be statistically significant ($P < 0.001$) To interpret the significant elevation in serum cholestrol and triglyceride levels of the heroine addicts the serum protein levels were estimated. The serum protein levels of heroin addicts and normals were 8. 8 dl^{-1} (±3. 9) and 9. 6 g dl (±3. 2) respectively The difference was statistically not significant. The average body weights of the heroin addicts and of normals were found to be 57 kg (±9. 8) and 59 kg (± 8. 9) respectively. The difference in body weight was also statistcally not significant. These results indicate that these addicts are not malnourished. The elevation in serum triglyceride level and cholesterol level is only due to the heroin addiction and not due to the poor dietary habits. The mean blood pressure of heroin addicts and that of normals were 122 (± 10. 2) / 79 (±9. 8) and 20/80 respectively. The results from HIV test showed that none of the heroin addicts have AIDS.

Effect of 'Ayurvedic' drus on worm infesfation

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Eighty five subjects form 'Thevarakkulum' an under vileged sector of Jaffna Municipality area (next to Holy Family Convent, Jaffna) were selected. The subjects were in the age group of 3—12 years. Twenty five subjects were administered with Embelia ribes (வாய் விளங்கம்) powder (6 g/day), 20 subjects were administered with Caesalpinea bondus (கஎச்சு) powder (10/day) and another 25 subjects were administered with Butea frondosa (பலாசம் வித்து) powder (7g/day) for three days after their dinner. The rest (fifteen) of the selected subjects were not fed with the above 'Ayruvedic' drugs and were used as controls The faecal samples of all the 85 were analysed on O day and 14th day after the intake of the drugs, for hook-worm, round-worm and whip-worm by iodine, smear method and by concentration technique. By the treatment with **Embelia ribes**, the the hook-worm infestation decreased from 64% to 8% round-worm infestation decreased from 88% to 8%, and that of whip worm decreased from 76% to 16% after 14 days. Before the administration of Caealpinea bondus the hook-worm, round-worm and whip-worm infestation rates were 55%, 75% and 65% respectively. Whereas after the treatment all three types of infestation decreased to 5%. The intake of Butea frondosa decreased the hook-worm, round-worm and whip-worm infestation from 72%, 80% and 92% respectively to 4%. In controls the hook-worm, round-worm and whip-worm infestation were 63%, 79% and 73% respectively and remaind the same after 14 days. From the experimental results it could be concluded that all three 'Ayruvedic' drugs which were used to treat worm infestation have shown significant effect on the worm infestation The cost of Vermox (500Mg) is SLR 21/= whereas the prices of 500 mg Embelia ribes, Butea frondosa and Caesalpinea bondus are Rs 7, Rs 8 & Rs 8 respectively. If these drugs have no toxic and side effects, it may be economical to use them.

An Unusnal Case of Homicide

N. Saravanapavananthan
Professor of Forensic Medicine, Faculty of Medicine,
University of Jaffna, Sri Lanka.

During the early part of October 1988, a woman named Mrs. T. Thurai-ammah received a fatal shock when the free ends of two wires which were connected to the main fuse of a domestic electrical supply were placed on her neck.

At the post-mortum examination asphyxial signs were noticed both internally and externally. The neck showed characteristic areas of burning.

Murder by electrocution is very rare.

There are very few cases reported in the medical literature on this subject.

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An appreciation

Rajani Thiranagama

23-02-1954 — 21-09-1989

I consider it an honour to write an appreciation of our dear colleague Rajani Thiranagama who died on the twenty first of September 1989 under tragic circumstances. Her untimely death at the tender age of 35 years was a rude shock not only to the members of the Medical Faculty, University and the community but also to those who who were concerned about the violation of human rights the world over.

She was the second daughter of an educationist Mr. Rajasingham and Mrs. Rajasingham. Rajani had her early education at Chundukuli Girl's School and Jaffna College. She had an impressive career even during the student days and excelled not only in studies but in sports, drama and music. She displayed her literary and dramatic talents in many ways. Rajani entered the Colombo Medical Faculty and passed out as a doctor in 1978. She chose to do her internship at the General Hospital, Jaffna thereby showing her deep interest and concern for the people of her community.

Rajani joined the Medical Faculty as a Lecturer in Anatomy in 1980 when the anatomy department was at its infancy. She saw it bloom from childhood to adulthood. Rajani left the island in 1983 to further her medical education and obtained a Ph. D. at Liverpool University. She returned to the country in 1985 at a time when the intellectuals were fleeing from Sri Lanka. She worked late into the nights and was able to build up the department to an extent comparable to many well established departments in other countries. The department built up by her will bear her name and it will be a living memory of her dedication and hard work.

Rajani was an outspoken and forth right person with a distinct interest in human rights. This prompted her to write books, articles and initiate the women's liberation oaganisation. She was even responsible for starting a home for the women who were victims of war and violence. The impact she had made on the society is reflected by the many messages of condolence which poured in at the Vice-Chancellor's office on her death. One could only imagine the heights that she would have reached had she lived to a ripe old age.

Even on the fateful day Rajani was the last to leave the Faculty after completing the 2nd M. B. B. SI examination. When will the Medica. Faculty have the honour of having an equally talented and devoted intellectual as Rajani Thiranagama?

May God give solace to her dear family members and may her soul rest in peace.

— T. S. —

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