MEDICAL SERVICE

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contents

EDITORIAL

How healthy our health services !

In this issue, through an article : "Councils for Health Promotion", Dr. C.M. Francis raised a number of issues regarding the promotion of a healthy health service. He speaks the part today's life-style has to play in determining the health of the people. He identifies five requirements for health living, i.e. good nutrition and dieting habits; healthy environment; avoidance of smoking and alcohol; good drinking water-supply and sanitation; and prevention of accidents. In order to bring about this he speaks of establishing health promotion councils at various levels, by which the people need to be made aware of various measures to improve health. He ends his article with a question, in the form of a challenge for us : "Will Catholic Hospital Association of India give the lead in establishing the Health promotion Council ?"

It is here we need to have a hard look at our health services and see if they really promote health or only to a great extent keep up a certain system of practice in delivering cure for the diseases and that too, in many cases, to those who come to our health care institutions. It is a human tendency to follow the easy course. We all like to follow the beaten track. But we are told in no uncertain terms about the need for leaving the beaten track and following a new track. I am referring here particularly to two documents, namely the new National Health Policy and the document by the Pontifical Council Cor Unum : The New Orientation of Health Services with respect to Primary Health Care work. Copies of the new National Health Policy was made available to all concerned together with the December '82 issue of our journal 'Medical Service' with a request to study it and see how we can implement it through our existing health care institutions. I had also made reference to the doument by Pontifical Coucil Cor Unum.

Together with this issue of Medical Service we are making arrangements to send to you all, copies of the Cor Unum document again with the same request to all concerned to study these two documents carefully and in the light of these two documents to frame policies and guide our actions in the field of health.

The study of these two documents will show what exactly should be our attitude, policies, priorities etc. in the field of health. For us the docu-

ment by Cor Unum is an additional mandate. Speaking about the need for conversion of our hearts and also methods the document continues : "The rapid development in the field of health service technology has often meant installing expensive equipments in the hospitals, requiring a large number of patients, while in many of the same countries in the world, up to 80% of the population are still with out health care services. Since Christians are the learner, we must reach out towards the masses by providing simple, accessible and promotional health care according to our own possibilities, modest as they are, or in conjunction with the public services, where this is allowed. Let us ever be mindful of the fact that service to the sick begins and continues to operate through the patient's human environment. Community Health Care is therefore part of the comprehensive pastoral work of the Church".

The document goes on, then with the various aspects of primary health care and Community Health. The last section speaks about Christians' Responsibilities in this field. Much is also said about the responsibilities of religious congregations in this field. The need for having a healthy relationship with the governments and for cooperating with them and others who are concerned with peoples' development, is pointed out in the document.

Now a few questions remain to be answered. What are we going to do with such documents and the messages in them ? What are our priorities going to be ? What is going to be our approach ? The answers will depend very much how convinced all of us are of the contents in these documents and how willing we all are to leave the beaten track and take up a new track which would involve struggles, difficulties and risks. But we have no other choice except taking up this challenge, if we are serious in serving the poor as Christ did. The question Dr. C M Francis posed and the challenge he has put forward are worth considering. Then let us all put our heads together, plan together and do something to meet this challenge before it is too late and make our own health care services more healthy.

Councils for Health Promotion

Dr. C.M. Francis

It is easy to follow the beaten track; this is what the cattle do. Is it not the same that we in the less affluent countries do with respect to health (and mnay other activities)? We pass through the same curative and preventive path, followed earlier by the more affluent countries, using their outmoded technologies, importing equipments which are about to be discarded by those countries and whith are totally unsuited to meet our heaith needs. An editorial in the Lancet of January 1/8, 1983 says : "the unjust distribution of health care among the world's peoples is a continuing disgrace." It will be good if the countries will share some of their resources, but our experience so far has been that this is unlikely to happen. But if our target is Health and not merely health care services, we need not wait for the affluent countries to dole out some of their surplus. We must cut across the circuitous path and have innovative programmes which will yield better health; the knowledge for the same is already available.

It is well known today that life-styles determine to a large extent whether people are healthy or become sick, needing costly repairs and patchwork. Improvements in health-giving life-styles are not costly and such measures can help to reduce the health gap between different classes of social and different parts of the country.

Among the more important requirements for healthy living are

(1) good nutrition and dietary habits;

(2) healthy environment;

(3) avoidance of smoking and alcohol;

(4) good drinking water supply and sanitation;

(5) prevention of accidents.

People who have been fed for a long time by propaganda and news of cures by medical and surgical procedures, have to be convinced that better health can be achieved by simple change in life style. Very often the adverse life styles are brought about by propaganda by vested interests. Such propaganda must be countered by positive propaganda — we have to sell health. Those interested in health of the people must make full use of all methods and media to propagate the fact that by taking a little more care of their life-styles, they can have a healthy life and avoid many of the diseases. The media must be courted, news must be created and views must be ventilated; we have to work with the people, the health professionals, legislators, politicians and the leaders. We have to forge strong links with various bodies — clubs, associations, schools and other educational institutions, industries and trade unions. All of them must be informed, convinced and persuaded not only to follow but also propagate healthy life-styles. Newspapers, magazines, cinema, radio, television and all other media must be made use of in this campaign.

That propaganda, if sustained, can achieve a lot without too much money and materials, is shown by the successful compaign against smoking in many of the more affluent countries, where cigarette consumption (which can lead to cancer and cardiovas-

cular diseases) is declining. Propaganda has led to enactment of legislation to control smoking — restricting advertisements, prohibiting smoking in public places like schools and other places where young people gather and protecting the rights of the non-smoker. Efforts are being made to make smoking socially unacceptable, countering the advertisements of the mighty tobacco firms to make smoking fashionable. Seven years of antismoking measures in France have produced very good results with millions giving up smoking and youngsters not taking up smoking, thus reaping the benefits of freedom from many crippling and killing diseases.

Alcohol also poses health problems; these problems are to the drinker, his family and the community. Both acute episodes of heavy drinking and prolonged drinking are injurious to health. They can lead to increased risk of cirrhosis of liver, cardiovascular disorders, aggravation of other physical disorders, malnutrition, aggressiveness, accidents and suicides. A change in life style, with abstention from alcohol or reduction in consumption, can bring about better health and reduction in illness.

With money saved from abstention from or reduction in drinking and smoking, the poorer people will be in a position to buy more and better food. This will reduce malnutrition. Considerable extent of fertile land is now being used for tobacco cultivation. With global and national reduction in tobacco consumption, the land could be better used for growing food grains and oil seeds, reducing the scarcity in food. With greater availability and better distribution of food, it should be possible to improve the nutrition of the people. Even where more food is available, it is necessary to be knowledgeable about nutrition and cultivate proper dietary habits so that the caloric, protein, vitamin and other requirements of the body may be met optimally. There is need to know how to prepare the food properly so that wastage is avoided and the wholesomeness of the food is retained.

Water is scarce, but intelligent use of available water will be beneficial. Many arid regions are making the available water serve more and better purposes. At the same time, it is also necessary to explore sufficiently in advance the possibilities of making more water available to the people. A little care can go a long way to make water more safe for drinking. It is not enough to make more water available for drinking and other purposes; disposal of water is equally important. More attention to such disposal can reduce water-borne and water-related diseases.

If people are conscious of their civic and social responsibilities and conduct themselves in such a way as to be responsible citizens, much of the environmental degradation can be reduced. Improvement can occur by individual and collective efforts, by Governmental and voluntary activities, by legislation and monitoring.

Accidents are on the increase, at home in factories and on the roads. Greater attention must be paid to the prevention of accidents. Many of them are caused by human errors and can be prevented if the instructions and rules are followed.

If people are to be made aware of these measures to improve health and persuaded to adopt them, it is necessary to make a concerted effort. This can be done through Health Promotion Councils. Such Health Promotion Councils need not cost a lot of money, but they certainly require people who have a vision and prepared to take innovative steps. There can be Health Promotion Councils at each hospital or

health care institution, at the regional level and an apex body at the centre. The activities at each level will vary. The health care institution can effectively participate in health education. It is local and can relate well to the people. The regional level council can co-ordinate the activities of the institutions and also provide health education to people who do not have access to the health care institution. They can also mobilise public opinion. The apex body at the centre should provide the guidance and help to the smaller regional and local councils. They should be able to get the co-operation of the media and the legislatures, both State and Centre. It should have the mechanism to collect information and data from various sources and to disseminate them to the appropriate bodies for action for Better Health. Will Catholic Hospital Association give the lead in establishing the Health Promotion Council ?

40th National Hospital Convention and Exhibition

Theme		Respect Life
Venue	:	St. Pius X College, Goregaon East Bombay-400063
Dates	:	November 2-5, 1983
		Await Details in Next Issue

Natural Family Planning in Developing Countries- with Special Reference to India

Dr. M.M. Mascarenhas

"Staying Close to Nature to Nurture our Families is our Life's Aim"

Introduction

To develop is to form into something whole, mature and fulfilling. The people of the developing countries were naturally evolving and growing to a desirable adulthood, when the technological thrust of the overdeveloped countries was forced on them, often we must admit with the contrivance of its own people.

William Dyson speaking in Bangalore recently at the Asian Conference on the Total Health of the Family said — "The Industrialised nations do not have the answer. We, who come from the Western European nations are held up as peoples who have found the path, the one and only path, to follow towards development. We alone, so many believe, have the response to the question about what is the best way to enable us all to live well upon this planet. I come to say to you that this is a myth. We do not have the answer. Possibly from the approaches to life of both your people and mine taken together, something much better, much more appropriate, may be found — so that tomorrow all your children and all our children might together share life better and more fully."

Dyson continues to say "that the words 'developed' and 'developing' as applied to nations today are narrow and inappropriate. They claim too much. Different people have taken different roads as their cultures have matured. One is more developed in one way. At best, we of the Western nations are adolescents on the historical scene when it comes to human wisdom.

Western health and medicine are schizophrenic. They speak of an aim for man's best, yet functionally they delve into his worst. Their primary orientation as sciences and as practices is toward human pathology — sickness, to failure, to human distortion.

Our understandings and approaches to health are out of balance and have become distorted, that we are crippled when we are called upon to contribute positively and well to our own lives.

Man becomes simply matter, and is viewed as functionally malleable. Human diversity and richness - personally, familially and culturally wanes. Creativity and the immense range of the human faculties and spirit are more and more narrowly valued, and focussed.

Human love, not perceived as functional and relevant, is now downgraded leaving a vacuum: As persons and peoples are devalued more and more, the road to manipulation has been thrown over more widely open".

Dr. Dyson's remarks are remarkably relevant to the field of contraceptive technology.

Dr. Val Beral, a colleague of mine, in a paper published by the British Medical Journal (15.9.82) concludes :

"The transfer from traditional to modern methods of contraception in recent decades has been accompanied by a transfer of deaths from complications of pregnancy (which modern advances in obstetrics and science have almost totally eradicated) to deaths from complications of the modern contraceptive methods. In 1975, for example, it is estimated that there were more deaths at ages 25-44 years in England and Wales from adverse effects of oral contraceptive use than from all complications of pregnancy, delivery and the puerperium combined."

She noted that the excess mortality from circulatory disease in women taking the pill was a direct effect of the pill.

The International Family Planning Perspectives on a ten country's study (Vol. 7 No. 3 Sept. 1981) "found that although many cultures impose behavioural sanctions on menstruating women, a substantial majority of women would *reject a contracetive method that induced amenorrhoea.* For whatever, their perceptions of the drawbacks of menstruation, most women consider it a natural, vital physiological occurrence indicative of good health, and a sign of continuing youth, fertility and feminity".

These observations made in a study of the cultural constraints and attitudes with regard to menstruation involved 5.322 parous women from 14 cultural groups in ten nations. The study was funded by the World Health Organisation's Special Programme in Research Development in Human Reproduction.

The purpose of the study was to develop an understanding of the relationship between menstruation and contraceptive use, and to determine the limits of disturbance or change in the cycle that users of contraceptive methods will tolerate.

When one considers that in those developing countries, whose women constituted the subjects in the above study, anaemia and malnutrition are so widely prevalent, one can see the reasons why the I.U.D. and hormonal medications not only falled to find acceptance, but also led to a higher mortality and morbidity.

Approximately 50% of all eligible women would accept natural methods for spacing and even limitation, as shown in both the pioneer research studies in India, namely the W.H.O. Multicentre Trial of the Ovulation Method (O.M.) and the Karnataka State Fertility Research Study.

India, in common with other developing countries, has about 80% of its population in rural areas. However, only 20% of the total number of doctors practise in these rural areas, while 80% prefer the cities. Hence, adding to the cultural resistance to artificial methods is the medical drawback making the IUD and pill which need medical supervision, unsuitable for the majority of our population.

"We may well ask ourselves the question whether in a country like India. which has only 23% of the couples of childbearing age practising family planning and where there are 90 million couples between 15 and 24 not using any method for any significant time, and amongst whom unfortunately breastfeeding in also decreasing, we can afford not to advocate and make accessible on a wide scale an effective, safe and acceptable natural method".

Nearly 50 years ago Mahatma Gandhi said "In this world there is enough for every

man's need, but not for every man's greed — and again 'Birth control is self-control'. Non-violence and Love were his bywords to our people.

Again we see that in spite of incentives and free services a recent house to house survey revealed that only 24% of the target couples were covered by sterilisation". (*Medical Times* Bombay — Nov. 1982.)

In Puerto Rico it was shown that sufficient data existed to demonstrate a *definite* and *alarming* relationship between contraception and neurosis which showed a great increase. (Fuster J.M. Paper 'Some Psychological Aspects of F.P.').

The Indian Council of Medical Research (Bulletin Dec. 1982) admitted that we have to accept that at the moment there is no ideal contraceptive free from side effects and complications suitable for use in all women.'

Family Planning is meant to help families, and to *help or deepen the relationship between husband and wife*. Only Natural Family Planning can meet this challenge, for by its very nature it opens the lines of communications and makes marriage a living and loving partnership. Marriage Counsellors need to realise this fact, and use Natural Family Planning (NFP) as a therapeutic tool in pathological marriages. Natural Family Planning meets the challenge of a human problem with a human solution, whereas technology *dehumanises* the partnership.

In developing countries *spacing is much more important* and contributes more significantly to regulating births than sterilization. "This is because marriages take place earlier and women under 30 account for the majority of births". (*Centre Calling* Sept. 1981 New Delhi).

W.H.O. Study

Research findings of the WHO Study in India, the Phillipines and El Salvador showed many common features shared by these three developing countries which the family planning policy makers could note. The two developed countries were Ireland and New Zealand.

The WHO Study included over 10,000 cycles in the most significant cross cultural study ever undertaken in the world. The Karnataka Study (K.S.) included over 50,000 cycles in a widely spread population typical of Indian conditions.

The following observations were made at the conclusion of the WHO study and these conclusions were again amply confirmed by the Karnataka State Study.

1. *Prime Motivation* : In Bangalore the reasons given for freely choosing the Ovulation Method were equally divided between.
   a. Dissatisfaction with other methods, either after their use or by hearsay.
   b. Natural was good and harmless.
   c. Religious reasons given equally by Hindus, Protestants, Muslims and some Catholics.
2. *Teaching* : by simple women called BAREFOOT TEACHERS led to the best results. The only taught who had to be withdrawn from the WHO study was a married nurse. Sometimes older and mature women make excellent teachers.

This is teaching using simple analogies to everyday life, e.g. a seed in the soil requires moisture to grow into a plant. Similarly a male egg or sperm needs the moisture and

nourishment of the woman's mucus to join the ovum and grow into a bady, or again the example of artificial insemination when the farmer sees the mucus at the cow's vulva as the right time for insemination.

3. *Rural and urban couples* : Generally speaking the slum or rural women had a better acceptance, as also illiterate, and semi—literate or less educated women. The rural people who prefer 'natural' things, accept abstinence more easily. In the three developing countries the majority of couples were from rural areas. Most of the families lived in 'single-room dwellings in poverty".

4. *Education* : This made no difference. On the contrary a quicker acceptance by illiterates made true our motto that FERTILITY KNOWLEDGE IS FERTILITY CONTROL. For community health workers, the concept of a "self-energised" independent couple makes NFP a desirable practice. In the WHO Study, 94% of illiterate subjects produced an interpretable pattern, 95% of those who had less than 6 years of schooling and 83% of those with a university education. Results of the teaching phase (3 cycles) showed that ONE TEACHING CYCLE would have been sufficient.

The illiterate women are often most intelligent. Once given the knowledge of their bodies they treasure this new awareness of their fertility.

5. *Religion* : In the WHO Study (268 couples) 33% were Hindus, 12% Muslims, and Protestants, Catholics were 36%.

The WHO Study concluded that the profile of a successful user couple was a 'Hindu couple with three children with the wife having less than 6 years of schooling and who used the O.M. for limitation.'

In most developing countries Natural Family Planning (NFP) has been accepted for reasons other than religion.

The following was a documented statement by WHO :

IT IS OF INTEREST TO NOTE THAT THE STUDY BEGAN AT A TIME WHEN LEGISLATION REGARDING COMPULSORY STERILISATION WAS BEING ADOPTED IN INDIA.

SOME OF THE SIGNIFICANT FEATURES OF THE WHO STUDY :

6. In the developing countries (India, the Phillipines and El Salvador) the DAYS OF BLEEDING OR MENSTRUATION AVERAGED 4.4 PER CYCLE, while they averaged 5.6 per cycle in the developed countries.

Hence women with leucorrhoea or vaginal and cervical discharges.

7. *Vaginal Discharges* : It was noteworthy that history of, or findings of cervical and vaginal infections did not influence the women's ability to learn symptom recognition. In the WHO Study 15% of subjects gave the history of pathological vaginal discharge.

Hence women with leucorrhoea of vaginal and cervical discharges could distinguish cervical mucus. This is an important finding, since leucorrhoea is present in approximately one-third of women in developing countries.

8. *Attitudes of Husbands* : 80% of the husbands in the first cycle were described as willing to co-operate in the practice of abstaining.

In 10% partners were ALWAYS involved in their wives charging, in 3% he was indifferent.

In 2% he was described as un-cooperative.

A further 28% were occasionally involved.

9. *Libido or sexual urge* : A frequently asked question is 'when does my wife experience more libido ?' is it during the fertile period ?"

More than 60% of women who freely answered the question on timing of Libido, said they experienced the urge just before (pre menstrual) or after menstruation (post menstrual).

These two periods correspond to the infertile periods. 14% women experienced libido during the fertile period. Often these wives have a communication problem with their husbands and need counselling.

10. *Coitol frequence of couples using the O.M.* : The most common frequencies as given in Bangalore, was twice weekly, 55% of the responding subjects said they were satisfied with this frequency, while 16% would have preferred a higher frequency. It is interesting to note that there was no decrease in coital frequency AFTER the couple started using this natural method requiring abstinence. In fact there was a marginal increase once the couples were well established (1.7 to 1.9 coital episodes per week).

This fact together with the findings on Libido were used to motivate reluctant husbands in the learning or transition period. As one formerly reluctant husband remarked after the first 3 months "I do not mind the abstinence now, because my wife responds so much better now, and we have greater satisfaction".

11. *The fertile phase* : (Days of sticky and slippery mucus + 3) averaged 8 days in the developing countries while they averaged 10.6 days in the developed countries.

The probability of pregnancy on days of sticky mucus was 0.024 — 0.0500. (WHO Study). 'In 96% of the cycles in the overall study no friction in the couples was caused due to abstinence in the fertile phase.'

12. *The average duration of mucus* : before the peak day was about 6 days giving adequate warning — only 2% if the case of OM users had one day of mucus before the peak day, 7% had 2 days and 10% had 3 days.

13. In both studies the CONTINUATION RATES WERE HIGH. In India these continuatic rates were higher than for any other method of spacing, and were in the region of about 70%.

14. *Spacing and limitation* : In both (WHO and K.S.) Studies the majority of couples used the method of limitation. In the K.S. only 39.2% used the O.M. for spacing whereas 60.8% used O.M.limitation.

Also in the WHO Study, "The desire for more children did discriminate some degree between the groups, as 51% of those becoming pregnant had expressed the wish for more children, compared with 37% of those who continued to the end of the study.

15. The effectiveness was significantly high in all three developing countries (Both WHO 99% and 89% K.S. Effectiveness).

16. It was interesting to note that many of the couples had previously used the rhythm method with arbitrary variations of so called 'safe and unsafe' days, e.g. one practised abstinence for the first 20 days of the cycle. Another couple had intercourse till the 8th day and then abstained till 15th day, and then recommenced coitus. Such couples were explained in a scientific method that of determining fertile and infertile days and thus got many more days for intercourse.

Twenty-two percent of couples overall fell into this category.

Conclusion : From the above data we can conclude that as in the W.H.O. recommendation and I quote "That the O.M. is a method worthy of more extensive trial to determine its general applicability in India, the Phillipines, and in San Miguel. Although the pregnancy rate in San Miguel is relatively high, it must be recalled that the majority of couples in that centre had never used fertility regulating methods previously, and would have an anticipated pregnancy rate of 90% or more rather than the 38% actually observed.

Widespread use of the O.M. in these circumstances, if it gave rise to results similar to those reported here, would be of substantial value in reducing the overall birth rate".

Though I have emphasised the immense suitability of NFP for use in the developing countries, it is by no means intended or implied that it is unsuitable for use in the developed countries. Not only are couples in these countries looking for an alternative to the methods available, but increasingly they seek the right to control fertility by an understanding of their own bodies and they need to live in harmony with their partners in an ecology free from artifice.

To the world in general is presented a safe, inexpensive, highly effective and culturally acceptable method of fertility control, where the couple knowingly and independently learn to use their sexuality as a partnership to achieve marital satisfaction and responsible parenthood in a mutually fulfilling relationship.

(Those who wish to get further details, references, information, etc., may contact: Dr. M.M. Mascarenhas, Director, CREST, 14 High Street, Bangalore-560005 —Editor).

Radioimmunoassay

Dr. Ramdas Shrirang Raikar, Ph.D.

The advent of radioisotopes in the field of diagnostic medicine marks an important milestone in medical history. In recent years, radioisotope techniques have come to be used in medicine for a wide variety of important diagnostic procedures. These techniques enable accurate and ready evaluation of a variety of physiological parameters such as functioning of important organ systems of the body, including thyroid, liver, pancreas, heart and kidney and metabolism of vitamins, proteins, carbohydrates, fats, etc., in health and disease.

The majority of these radioisotope procedures essentially involve administration of a 'tracer dose' of the radioisotope, either orally or by injection to the patient. The uptake, retention and clearance of the radioisotope by and from the organ is determined by external measurement of the radiations from the isotope. Another interesting application, known as isotope scintigraphy, enables visualization of the size and shape of these organs and delineation of structural lesions in them.

A major breakthrough in recent years in the application of radiotracers in medical diagnosis has been the development of a wide spectrum in-vitro radioassay techniques. The specific advantage of these techniques is that they do not involve administration of radioisotopes to the patient. The concentration of important biologically active ingredients in body fluids can be estimated by these assays.

Among the in-vitro applications of radioisotopes, radioimmunoassays have already been established as versatile and unique for a variety of diagnostic procedures. These assays are employed for clinical evaluation of the concentration levels of vitally important biological ingredients such as hormones, vitamins, steroids, drugs and exogenous antigens, thereby enabling early diagnosis of various diseases and better management of treatment.

Dr. Rosalyn Yalon along with Dr. Solomon A. Berson—both sharing the Nobel Prize for Medicine in 1977—discovered the technique of Radioimmunoassay and nurtured it through the early years with hard and meticulous work to establish its usefulness in medical science.

Techniques for the measurement of the physiological concentrations of many biologically active and important substances require the accurate and precise quantitation of picomole (10^{-12} mole) or even famto mole (10^{-15} mole) amounts of these compounds in biological fluids. Measurements of such low concentrations of a compound is usually most satisfactorily accomplished by the use of a compound in a radioactively labelled form together with a specific binding reagent in a saturation analysis system such as radioimmunoassay.

Principle of Radioimmunoassay

Competition between a labelled and an unlabelled (standard sample) antigen for a limited amount of antibody forms a basis of radioimmunoassay. In radioimmunoassay, a fixed concentration of labelled tracer antigen is incubated with a constant dilution of antiserum such that the concentration of antigen binding sites on the antibody is

limiting—for example, only 50% of the total tracer concentration may be bound by antibody. If unlabelled antigen is added to this system, there is competition between labelled tracer and unlabelled antigen for the limited and constant number of binding sites on the antibody and thus the binding of the labelled antigen to the antibody is progressively inhibited with increasing concentrations of unlabelled antigen present in the incubation mixture either as a standard or the unknown plasma sample. A calibration or standard curve is set up with increasing concentrations of standard unlabelled antigen and from this curve the amount of antigen in unknown samples can be calculated.

*
Ag (Labelled antigen) + Ab (Antibody) → * Ag. AB (Bound complex)
←
+
Ag (Unlabelled antigen standard or unknown)
↑
↓
Ag. Ab (Bound complex)

There are several major assumptions in application of the above principle.

They are: a) Physico-chemical properties of the labelled and unlabelled antigens are identical.

b) Behaviour of the standard antigen and the antigen to be measured in an unknown sample is similar in respect of displacing the radio-labelled antigen from antigen-antibody complex according to the law of mass action.

c) Antibodies against the specific antigen to be homogenous.

The three basic necessities for a radio-immunoassay system are an antiserum to the compound to be measured, the availability of a radio-actively labelled form of the compound and a method whereby antibody bound tracer can be separated from unbound tracer.

The two main advantages of radio-immunoassays are their sensitivity and specificity both of which depend predominantly on the use of anti-bodies that possess a higher selectivity for the material to be assayed. Antibody is secured through bleeding at set times over precise time periods using an animal host (typically a rabbit; guinea pig and sheep) which has been periodically challenged with a given antigen. There are various techniques for the production of antisera. The specificity, affinity and titre vary with immunization procedure and hence each antiserum must be tested carefully. The antiserum should be specific and should not cross react with related antigens/compounds. Affinity of the antibody should be high because this determines the sensitivity of the assay system and moreover the attainment of equilibrium will be faster (after antigen-antibody reaction). Titre is a dilution of antiserum at which 50% of the labelled tracer will be bound to antibody in the absence of unlabelled antigen. If the titre is high, one can include more number of samples per unit volume of an antiserum.

One of the essential reagents in this system complex is the labelled antigen. Antigens are most frequently labelled ^{131}I, ^{125}I, ^{3}H, ^{14}C or ^{67}CO and protein molecules are usually labelled with isotopes of iodine i.e. ^{131}I or ^{125}I. Radioiodination is nothing but the 'tagging' radioisotopes on the tyrosine residues of protein molecule. There must be a methodology for the preparation of a highly purified antigen that can be

radiolabelled (tagged) without sacrificing any of its immunoreactivity.

The third essential thing is the separation procedure of bound and free antigen which involves various techniques suggesting that no single procedure is completely satisfactory for all purposes. The method should be relatively simple to perform, economical and reproducible. Among the methods used are electrophoresis, chromatoelectrophoresis, adsorption to dextran coated charcoal, cellulose powder, finely divided silica or talc; precipitation with salts or organic solvents of the immune complex; bonding the antibody or antigen to a solid phase absorbent which facilitates the precipitation or separation of bound and free fractions by centrifugation. Another technique used is the double-antibody method, where a second antibody is used to precipitate the primary antigen-antibody complex.

Advantages of Radioimmunoassay

1. Simple procedure
2. Extremely sensitive and specific
3. Reproducible results
4. No radiation exposure to patient
5. Simple instrumentation and low initial investment
6. Widely applicable

Applications of Radioimmunoassay (RIA)

The great potentialities of radioimmunoassay procedures in medicine can be readily appreciated from the following typical applications:

1. RIA of Insulin

Estimation of the levels of insulin present in the blood serum under various conditions, including fasting and after-glucose stimulation, is of considerable importance in the early defection and management of some forms of diabetes and for detection of certain tumors of the pancreas called insulinomas.

2. Human Placental Lactogen (HPL)

RIA offers an easy and reliable method of determining the levels of human placental lactogen in pregnant women. Evaluation of the concentration of this hormone enables a clear differentiation of normal pregnancies and abnormal risk pregnancies.

3. Human Chrionic Gonadotropin (HCG)

Highly sensitive RIAs of β-HCG can detect pregnancy even before the missed period with a high degree of accuracy.

4. Triiodothyronine (T_3) and Thyroxine (T_4)

Very precise evaluation of thyroid hormones such as T_3 and T_4 in human serum by RIA procedures is of great help in thyroid function studies. Such estimations enable clear differentiation between hypo and hyper thyroids and normals, leading to better planning and management of patient treatment. RIA offers a unique means of detecting neonatal hypothyroidism, thereby enabling treatment before irreparable brain damage sets in.

5. Australia Antigen

Estimation of Australia Antigen at very low concentration levels by RIA is of great importance in screening of blood collected by blood banks. The screening is essential for ensuring that serum hepatitis which causes high mortality rates, is not passed on to the blood recipients.

6. RIA of Drugs

Screening of the levels of Digoxin and Digitoxin which are very useful but toxic

drugs employed for treatment of heart patients, is vitally important in monitoring the progress of the patient and for optimisation of digitalis therapy.

7. RIAs of Pituitary Gonadotropins and Steroid Hormones

Rapid advances have been made during the last two decades in the understanding of the physiological interactions between the brain, pituitary and the gonads. Perhaps no other single methodology has contributed so much to the advance of the study of reproductive endocrinology as has the development of the highly sensitive RIAs for all peptide and steroid hormones.

Profiles of serum levels of pituitary gonadotropins in relation to ovarian or testicular steroid hormones have helped in the understanding of the feedback control mechanism between the target gland hormones and the pituitary and hypothalamic system. Thus it is now possible to evaluate more definitely the disfunction existing at each level. The synthesis of hypothalamic hormones, Thyroid-releasing hormone (TRH), Gonadotropin-releasing hormone (Gn-RH) and their use for diagnostic testing for pituitary has further contributed to defining the site of the lesion.

Limitations of RIA

The greatest single limitation of radioimmunoassay is that the results are not available within a day or so. A batch of samples is to be collected before they can be processed and where results are required before a clinical decision can be taken, such waiting periods of several weeks would be intolerable.

How to start a RIA Clinic ?

This will depend upon the aims and objectives of the set-up; whether it will be a diagnostic aid only or it is going to be a set-up where one would also produce antibodies and tagging of radioisotope, etc.

For a small diagnostic laboratory one would like to have minimal necessary structure which will have

1. Counting room
2. Storage and working room

Radioimmunoassay work involves the handling and use of very small quantities of radioisotopes usually not exceeding 100μCi of ^{125}I and other isotopes. The equipment and facilities normally available in a hospital or pathological laboratory can be readily used for this work. In addition, a simple electronic counter, a centrifuge and automatic micro-pipettes have to be procured. The operative manipulations are simple involving often the employment of ready-to-use RIA kits. In view of the very low activities of the isotopes handled, hazards due to possible radiation exposure and personnel contamination are negligible.

In India, the Bhabha Atomic Research Centre is working closely with medical institutions to extend the benefits of these advanced techniques to a large cross section of the population. The following ready-to-use RIA kits are available from the Isotope Group, BARC.

RIA kit for Insulin, RIA kit for Human Placental Lactogen, RIA kit for Triiodothyronine and RIA kit for Thyroxine. These kits provide isotopically labelled antigen of high quality, standards of antigen (unlabelled) to serve as controls, known quantities of antibody having specificity and other reagents required for carrying out the radioimmunoassay.

A limited radioimmunoassay service is also offered to analyse and quantitate serum samples supplied by user institutions. The Isotope Group, BARC, also offers on-the-job training in RIA to medical and paramedical personnel.

LEPROSY—a physical disease with a mental problem

Bro. PAUL

The article on Leprosy by Dr. Paul Neelamkavil prompted me to also take up this subject. There are a few people in India who have travelled as extensively as the writer and seen as many of the Catholic and other Christian Leprosy programmes and clinics. The range of Catholic activity in leprosy is quite mind boggling. There are large modern hospitals with the worlds most sophisicated equipments to the smallest remote clinics held in rural India to neat little rooms in the worlds worst type of slums - and all are clean. Not sterile but clean and the majority have some small sign that shows they are motivated by Christ's love.

The long-term treatment plan must be an integrated one as Dr. Paul said, to set up clinics labelled "leprosy clinics" is to seperate not just the disease but the patient and to immediately identify him with a problem that ostracises more quickly and more severely than any other disease. It is ironical that a man may stray and contact V.D. and then infect his wife—both later receiving treatment, the wife in love and compassion remains with the erring husband, and if any of the other family members know, they are a little upset but forgiving in the strain of "no one is perfect" - but let a husband or wife become a leprosy patient and see what happens. In endemic areas where we need to limit our work to leprosy let us have 'skin clinics'. This however means that we must be prepared to identify more diseases and to give prescriptions. The cost of most skin ointments can be high unless we can supply or revert back to older and more simple compounds for such common problems as ringworms and scabies.

The mode of treatment has changed in the last few years and it is interesting to see that some of the oldest clinics in India are finding high incidences of 'Dapson resistance'. The basic cause of this is the poor intake of tablets by patients. The only way we are going to overcome this is by extensive health education. That will have to start with ourselves. The only way to truely understand a problem is to be part of it. Set yourself a goal. "I will become a patient today and start taking a tablet regularly" (You could decide to take a small vitamine tablet regularly), Now remember for religious it is even easier as we have been trained into more self-discipline and have such easy aids as dining rooms where we can conveniently put our tablets. We have each other to remind us as we live in a close community. Try and see how you manage on your own without others help to take a daily tablet.

The emphasis is now on multidrug therapy. This is not cheap but few religious institutes have to worry about this, and that is good in a sense. The decision to start multidrug therapy however is a decision that needs careful planning. We must be sure that the patients we start are regularly taking their tablets; this is not just regularly collecting their tablets. Plan house visits to see how many are in stock. Many clinics and 'experts' give one or even two months, tablets. I think this is dangerous as it leaves the patients too long without contact. It may increase the work load, but the more often the patient comes to the clinic the more chance we have to promote 'care of the patient by the patient' - this is not only taking the little Dapson tablet but allows continued talks and encouragement about

hand and foot soaking. If by more visits we feel that we are increasing our work load too much, we must seriously consider encouraging more women and students to come and give voluntary help and service in our clinic work. To involve more of the people in our parish in this simple service enriches and rewards every one particularly the parishioner who often wants to help the church but never gets the opportunity or the chance. It is also very simple to check the intake of Dapson of a patient by testing the urine. This simple field test can be done in any clinic. The cost of equipment to start this testing would be less than Rs. 80/-. (Write for details if you are interested).

The next most serious step in considering not just multidrug therapy but in considering the quality of our work is the need to have a functioning skin smear technician. Medicine is not a game and the patients are not just 'poor people'. The need to correctly classify patients of leprosy and the need to have correct records of their bacteria content is now even more important. Remember that as this multidrug programme takes even more importance in treatment we may be questioned by authorities as to the quality of our work. Let us not shame the Lord who gives willingly to us. Every Catholic group involved in leprosy should have a skin smear technician and equipped laboratory where patients must be examined at least twice a year and with multidrug therapy at least 4 times in the first year of multidrug therapy, and at least three times in the second. Absolute minimum. If you are unable to do this, then either take steps to do so or stop treating leprosy patients. That sounds severe, but let us now realize that after more than 30 years we have made little progress in decreasing the problem. The poor management of the patient taking Dapson and our poor supervision - which includes poor patient health education - has led after all this time to the terrible medical problme of drug resistance. The time needed for patients to become Rifampicin Resistent will be less and more severe as it is a directly related to anti T.B. drug. The charitable act of handing out Dapson and other antileprosy drugs without full control, checking and follow up is not charitable nor Christian, but damaging to the patient and society and a reflection on our lives that must always reflect the fullness of care. Simple handout of any medicine is not care nor is it true love; it is a sham.

Added to all this is the fact that most of the rehabilitation work among leprosy patients in India and the world generally is done by Christian orientated groups. In India many of us are involved in the work among leprosy patients in colonies. The rehabilitation work already taken up is tremendous. However, I raise the following points and questions. The goods produced through our efforts must at some time reflect a real sign of rehabilitation and not just support and work. Work must have a true aim. If the present goods being produced are only being sold through our orders and in Europe we must surely consider that this may one day come to a sudden halt if the economy of Europe, America and other Western countries taking our goods change. As many have experienced in the last year or if the policy of a government changes, that restricts the movement of money in or out. We must start now to protect not ourselves but the patients for whom we claim to be working for and helping. Aim at Indian markets. This is not only difficult in an already competitive and highly unemployed country but it is a real challenge to our activities. Try to have a more realistic approach to what we produce. Try to aim for no more than say 75% overseas markets in the next two years, subsequently 50% and then only 25%. This will mean that we have to go away from

'fancy and pretty' to local and serviceable goods. The other fear that I have is that the actual patient has very little real say in the overall management of our rehabilitation programmes. They are simply employed and in fact the whole work would cease if we walked out. This is not rehabilitation. It is a form of showmanship.

Many of the readers may be slightly-offended by these lines, but that does not really worry me. In fact it has made you think, then we can realistically go to the next step.

The time has come for those of us who are extensively working in leprosy to hold a regional based series of seminars or meetings to discuss our medical programmes rehabilitation objects and mutual co-operation in such things as community buying of medicines and goods, overall health education of the public and ourselves and the need to have training courses for such programmes as Leprosy, T.B., Vitamin A deficiency leading to child blindness.

Medical Ethics Forum-31

Fr. George Lobo, S.J.

The New Latin Code of Canon Law and the Medical Practitioner Introduction

While the whole Code touches the life of every Christian in some way, some laws affect medical personnel in a special way. The new Code stresses the common obligations and rights of all the members of the Church. "All the faithful who are reborn in Christ are equal in dignity and action which each one according to one's proper condition and role, contributes to the building up of the Body of Christ." (Can. 208)

Role of the Laity

The laity are especially called to imbue the temporal order with the spirit of the Gospel (Can. 225,5). Hence the healing activity of Christian doctors and nurses is to be inspired by the saving and healing mission of Christ.

The due freedom of the laity in temporal matters is to be recognized, although they have to be attentive to the teaching of the Magisterium (Can. 227). Those who are eminent in competence and prudence could be called to be experts and counsellors to the pastors of the Church (Can. 228,2.) They have the duty and the right to acquire sufficient knowledge of Christian doctrine (Can. 229,1). This is all the more necessary when they gain expertise in medical knowledge and skills.

Right of Association

The faithful may form associations for fostering Christian life or the apostolate (Can. 298,1). This applies to Doctors' and Nurses' Guilds. No association is to call itself Christian without the consent of competent ecclesiastical authority (Can. 300). All such associations are subject to the vigilance of ecclesiastical authority in order to preserve integrity of faith and morals (Can. 305,1).

Sacraments in General

In case of necessity or real spiritual good, provided there is no danger of error or indifferentism, Catholics may receive the sacraments of Reconciliation, Eucharist and Anointing from a non-Catholic minister of a Church in which these sacraments are truly found if it is physically or morally impossible to approach a Catholic minister (Can. 844,2). In India this applies particularly to the Syrian Orthodox Church. The need may particularly arise when there is danger of death.

Catholic ministers may minister the same sacraments to non-Catholic Orientals if they ask of their own accord and are rightly disposed (Can. 844,3). In danger of death, or other need, according to the judgement of the bishops, these sacraments may be given to other non-Catholic Christians if they cannot approach their own ministers, ask of their own accord, have the Christian faith regarding them and are rightly disposed (Can. 844,4).

In the administration of the sacraments, the oil used should be from olives or other plants. They have to be blessed by the bishop (Can. 847,1), although the oil for anointing, in the case of necessity, can be

blessed by any priest during the celebration (Can. 999,2).

Baptism

Baptism is not to be celebrated in a hospital unless the bishop decides otherwise, or in case of necessity or other important pastoral reason (Can. 860,2).

In danger of death, the infants of Catholic or non-Catholic parents are licitly baptized, even if the parents are unwilling (Can. 868,2).

An exposed infant or foundling is to be baptized unless it is clear after diligent investigation that Baptism has already been conferred (Can. 870). If it is thought prudent to give the infant be adopted by non- Catholic parents, Baptism would not be advisable.

An aborted foetus, if alive, is to be baptized as far as possible (Can. 871). There is no reference in the new law to intra-uterine Baptism.

Confirmation

In the danger of death, the parish priest, and indeed any priest can minister the sacrament (Can. 883,3°). It can be given to children of any age in danger of death.

Euachrist

Small children in danger of death may be given H. Communion if they are able to discern the Body of Christ from common food and receive it reverently (Can. 913,1).

One must abstain from food and drink, except water and medicine for an hour before receiving H. Communion (Can. 919,1). The elderly and the sick as well as those caring for them may receive the Eucharist even if they have taken something within the hour (Can. 919,3). Hence medical personnel on duty are not strictly bound by the eucharistic fast.

The faithful who are in danger of death from any cause are to be refreshed by H. Communion or Viaticum (Can. 921,1). If they are in a critical condition, even though they have already received Communion that day, it is highly recommended that they communicate again (Can. 921,2). If the danger of death continues, it should be administered several times on different days (Can. 921,3). The Sacred Viaticum is not to be delayed too long. Care must be taken to receive it in full consciousness (Can. 922).

A sick or elderly priest, if he is not able to stand, may celebrate sitting down, not however before the people without the permission of the local Ordinary (Can. 930,1).

A blind or otherwise sick priest may licitly celebrate Mass using any of the approved texts, with the assistance, however, of another priest, deacon or even a properly instructed lay person (Can. 930,2).

In case of need, Mass may be celebrated in any decent place (Can. 932,2), in which case there must be a convenient table, and always a table cloth and corporal (Can. 932,2).

Reconciliation

A priest who has habitual faculties for hearing confessions, by virtue of an office or concession of the local Ordinary, can exercise the same anywhere in the world unless the Ordinary of the place forbids it (Can. 967,3).

In the danger of death any priest can validly and licitly absolve any penitent from any censuries and sins, even if an approved priest is present (Can-976).

Anointing of the Sick

Pastors and relatives should see that the sick receive the sacrament in due time

(Can. 1001). It may be ministered to a faithful "who having reached the use of reason, begins to be in the danger of death due to sickness or old age" (Can. 1004,1). It may be repeated if the sick person, after rallying, again falls into grave sickness, or if in the same sickness, the danger becomes graver (Can. 1004,2). In doubt about the use of reason or the gravity of the illness, the sacrament is to be ministered (Can. 1003). Hence the sacrament must be understood more as that of the sick than of the dying.

The sactament may be conferred to a sick person who at least implicitly asked for it when he or she was conscious (Can. 1006). It is not to be given to one who obstinately perseveres in grave sin (Can-1007).

Marriage

The New Code emphasizes the need for proper preparations for marriage (Can. 1063). Doctors and nurses may be called upon to play an important role in this.

Now an 'human act' is required for the consummation of marriage (Can. 1061,1). Hence sexual intercourse by a drunken husband or one that is violently imposed would not consummate marriage and make it absolutely indissoluble (Can. 1141).

Marriage impediments have been greatly simplified. For instance, only relationship up till that of first cousins in the collateral line invalidates marriage (Can-1091). There is no more any impediment of affinity in the collateral line (Can. 1092).

Impotence (inability to perform coitus) that is antecedent and perpetual invalidates marriage (Can-1084,1). According to a decree of the S. Congregation for the Doctrine of the Faith, 13 May 1977, it is clear that double vasectomy as such does not constitute impotence. One may likewise conclude that women who have undergone tubectomy, those with retroflexed uterus or even those lacking postvaginal organs are not to be excluded from marriage. It seems also probable that even one with an artificial vagina that is functional could validly marry.

Sterility neither prohibits nor invalidates marriage (Can. 1084,3), unless it is purposely concealed (cf. Can. 1098). Error regarding fertility as such does not invalidate marriage unless the quality is 'directly and principally intended' (Can. 1097,2). It may happen that some persons, especially because of a particular cultural background, may so desire fertility in the partner that in its absence marriage would not only be difficult but absolutely inconceivable. In such a case an error regarding the quality of fertility may amount to error regarding the person and thus invalidate marriage.

The expertise of psychiatrists would be called in especially in evaluating the psychic factors that would substantially vitiate the marriage consent : 1) lack of sufficient use of reason; 2) grave defect of judgemental discretion concerning the essential rights and duties of marriage to be mutually given and accepted; 3) psychic causes that make a person incapable of assuming the essential obligations of marriage (Can. 1095). An example of the last would be true homosexuality.

Children who are born at least 180 days from the day of marriage or within 300 days of the dissolution of marriage are presumed legitimate (Can. 1138).

Funerals

The Church still strongly recommends the pious custom of burial, but does not forbid cremation unless it is chosen for reasons contrary to Christian doctrine (Can. 1176,3).

Apart from notorious apostates, heretics and schismatics, as well as those who have chosen cremation for reasons contrary to the Christian faith, ecclesiastical funeral is to be denied only to other manifest sinners to whom it could not be granted without public scandal of the faithful (Can. 1184). Regarding suicides, we may doubt in most cases about the existence of manifest subjective guilt or the scandal could be averted through proper explantion.

Penalties

Those who commit homicide or grave mutilation are to be punished with various expiatory penalties (Can. 1391,1).

Those who effectively procure abortion incur *ipso facto* excommunication (Can. 1398,2). The penalty, however, presumes that deliberation and grave subjective imputability are present (Can. 1323 and 1321).

Extract from a WHO Technical Report on Chemotherapy of Leprosy for Control Programmes (Report of a WHO Study Group)

A Study Group on chemotherapy of Leprosy for control programme was convened at Geneva from 12 to 16th Oct. 1981.

The objectives of the meeting were :

1. To review information on problems related to Chemotherapy and on Chemotherapeutic regimens for Leprosy, which has accumulated since the fifth meeting of the WHO Expert Committee on leprosy in 1976.

2. To recommend for leprosy control programmes appropriate multidrug regimens for multibacillary cases including new, treated, and drug resistant cases, whether clinicaly suspected or proved.

3. To recommend regimens for paucibacillary cases in control programmes.

4. To identify further research needs in the clinical and operational aspects of chemotherapy in leprosy.

1.6.2.1. Need of revision of control programmes

Combined chemotherapy with more potent and expensive drugs required to be more closely supervised and monitored than dapsone monotherapy. These extra activities could not readily be superimposed on existing leprosy control programmes, already often overstretched for manpower and financial resources. Therefore changes in broad policy have tended to be delayed, especially those concerning.

(i) the re-training and orientation of health personnel for the management of cases on combined therapy;

(ii) the readjustment of tasks and the priority of treatment activities, and the information given to patients concerning their disease and its treatment;

(iii) the study of cost effectiveness, including a comparision of the costing of effective combined chemotherapy at high cost but of perhaps limited duration versus low cost therapy of long duration and poor compliance.

...The proposed multidrug regimen is designed for the treatment of all categories of multibacillary patients, which includes :-

(1) freshly-diagnosed, previously untreated patients ;

(2) patients who have responded satisfactorily to previous dapsone monotherapy ;

(3) patients who have relapsed after a period of dapsone monotherapy; and finally,

(4) patients who have relapsed with foot-pad proven dapsone-resistant leprosy.

Duration of treatment

Combined treatment should be given until the size of the bacillary population has been reduced to such an extent that resistant mutants are no longer present. Since the time required to achieve this is not known, combined therapy should be given for the entire course of treatment which must be at least two years duration, and be continued wherever possible to smear negativity.

3.1.5. Recommended standard treatment regimen

Rifampicin - 600 mg once - monthly supervised

Dapsone - 100 mg daily self-administered

Clofazimine - 300 mg once - monthly supervised together with 50 mg daily self-administered.

3.2. Treatment of paucibacillary leprosy

Paucibacillary leprosy is (lepromin positive) I, TT BT leprosy as diagnosed clinically or based on histopathology, with BI of /-2 according to the Ridley scale at any site.

Although a large proportion of patients with single lesions do heal spontaneously, it is still necessary to treat them because it is impossible to identify those that will heal spontaneously, while those that do not may develop nerve lesions and others will be downgraded to multibacillary forms of the disease.

3.2.2. Recommended a standard treatment regimen

The following regimen is recommended :

Rifampicin 600 mg once a month during 6 months plus dapsone 100 mg once a month during 6 months plus dapsone 100 mg (6-10 mg/kg body weight) per day for 6 months.

The administration of rifampicin should invariably be fully supervised. The dapsone may be given unsupervised. If treatment is interrupted, the regimen should be recommenced where it was left off to complete the full course.

3.2.3. Priorities

Short-course chemotherapy of paucibacillary leprosy should be introduced in the following order :

1. to all newly-diagnosed paucibacillary patients;
2. to all dapsone-treated paucibacillary patients;
3. to paucibacillary patients who are currently on treatment with dapsone monotherapy and who have not yet completed two years of treatment.

4.10 Training

With the introduction of multidrug regimens training of all categories of staff including those working in the primary health care delivery system must be undertaken and recognised to the new strategies being evolved and the possible bottlenecks and complications that may arise. The training must be planned and organised so that each type of personnel is prepared to perform clearly-defined activities and functions within the overall context of the programme. Training of medical students and refresher courses for physicians should also form integral components of this activity.

A working manual should be prepared for the guidance of all personnel engaged in the programme. The manual should give detailed instructions regarding drug combinations, treatment delivery and possible side effects that may arise, in simple language. The chain of referral and the appropriate action to be initiated should be precisely indicated.....

Central Purchasing Service of CHAI and Materials Aid

C.T. Thomas

From time immemorial Church and allied organisations have been also in the arena of distribution and handling of material aids in connection with relief and development projects and institutional programmes. True to her universal character, the Church in India also has been engaging in service activities— health, education, development- and receiving and expending enormous aids in cash and kinds.

Of late many of the supporters and promoters of these various projects felt that they could cover a large portion of the needy people with the available resources, if they could evolve a system of co-ordination and procurement of material aids at economic prices.

In this context the CHAI, in 1974, in consultation with likeminded organisations at home and abroad, took a lead by organisng the Central Purchasing Service (popularly known as CPS) with the permission of the Govt. of India (Ministry of Commerce) primarily to assist health institutions all over the country in the procurement of material aids irrespective of any religious affiliations.

Purchasing Assistance at Deemed Export Price

One of the main activities of CPS is providing co-ordination and consultancy in the procurement of indigenously manufactured quality engineering goods including vehicles for projects of social objectives at the "deemed export price', against payment in free foreign exchange by using the donations that are being sanctioned by the overseas charitable and voluntary aid giving organisations. This service has been made available after obtaining a specific sanction from the Govt. of India on the principle of 'social-objectives'. The "deemed export price" is the rate worked out by the suppliers after taking into account the export incentives as applicable and allowed to them by the Govt. of India such as supplementary cash assistance in lieu of Central Excise Duty, import replenishment licence, etc. The percentage of price difference between the deemed export price and the domestic price varies from item to item and from time to time, as the export incentives are always subject to the review of the Govt. of India. All the same the deemed export prices are much lower than the domestic prices.

Conditions and Guidelines :

Given below are some of the important conditions and guidelines as to how far the CPS can be used for the procurement of Indian made equipment at the said deemed export price for use in projects of social objectives.

Conditions (as laid down by the Govt. of India) :

(i) The donors are national or multinational voluntary organisations abroad and payment for the Indian equipment is made in free foreign exchange through banking channels.

(ii) The supplies financed by the donors are meant for donations to charitable

and non-profit organisations in India working in the field of health/social welfare/education/rural development on nonsectarian basis without considerations of religion, caste or creed.

(iii) The donors place the order with Indian suppliers directly and payment for the equipment is also made directly from abroad.

(iv) The equipment is sold by the suppliers at export price.

In line with the above conditions the following points are to be strictly adhered to while availing of the services of CPS.

(i) The projects for which the suppliers are to be arranged under the deemed export pricing scheme are necessarily to be in any one of the areas of social and development work mentioned against condition No. (ii) above.

(ii) The projects should be legally bound and organised.

(iii) The funds required for the purchase are to originate as donation from overseas for charitable purpose and shall not have any room for subsequent adjustment against such donation in India.

(iv) The donation required for the purchase should be transferred to BEGECA, West Germany, by the donor organisation at the appropriate time.

(v) In case the donor is an individual, the donation is to be transferred to BEGECA through a voluntary donor organisation abroad.

Procedures

(i) Once the funds for the purchase of the materials are sanctioned, the same may be intimated to CPS together with all possible information on the materials including specification, preference for a supply source, etc., and the postal address of the donor.

(ii) CPS will then take an undertaking from the project authorities to the effect that the material shall be used for the purpose for which it has been sanctioned and an authorisation to the effect that both CPS of CHAI and BEGECA, West Germany, are empowered to deal with all connected commercial matters on behaf of the projects.

(iii) Simultaneously, CPS will arrange for the offers from suppliers, scrutinise the same with particular reference to specifications, quality, price and commercial points like terms of payment, delivery schedule, guarantee, warranty period, after sales service, etc., with the knowledge of the project authorities.

(iv) After having verified and satisfied, CPS will forward the offers to the projects authorities for the approval of the same by the legal holder of the project.

(v) The project authorities after having satisfed with the offer so arranged, will forward at least three copies of the invoice to CPS duly approved.

(vi) The approved invoice will then be forwarded to BEGECA with necessary direction to place firm order with the concerned Indian supplier.

(vii) On receipt of the advice and duly approved invoice from CPS, BEGECA, after confirming ihe availability of funds from the donor concerned,

places firm order with the Indian supplier, under intimation to all concerned.

(viii) After placement of firm order both BEGECA and CPS follow up with supplier for the delivery of the ordered item.

(ix) BEGECA makes payment directly to the supplier in India through banking channel as per the terms of payment agreed upon.

(x) In case of damages and losses to the consignment in transit the matter should be brought to the knowledge of the transporters and suppliers by the project holder under intimation to CPS and BEGECA. Usually the consignments will be sent under the cover of insurance poilcy to the project in which case the project authorities will have to lodge claims against insurance companies well within the time specified for the damages and losses, if any.

(xi) In case of any defect in the supply made it should be immediately intimated to the supplier under intimation to CPS and BEGECA who would see that the reported defects are rectified to the entire satisfaction of all concerned.

(xii) In case of any delay in the installation of the equipment the same should be intimated to CPS for taking up the matter with the supplier concerned.

(xiii) The supplies received under the deemed export scheme are covered under the Foreign Contribution Regulation Act and such supplies are treated as foreign donation in kind and hence reporting to the Home Ministry, Govt. of India, under form No. FC-6 is a must.

One could observe from the above that both CPS and BEGECA would take care of the job in arranging the required Indian made equipment of any nature, vehicles and other supplies to the projects of social objectives provided the project authorities comply with these requirements.

BEGECA, Partner in West Germany

BEGECA is a procurement organisation for church-related and/or charitable projects in developing countries. The German Govt. recognised BEGECA as a charitable organisation and is exempted from taxes. Thus BEGECA is a donor's procurement agency and trustee, based on which the Govt. of India authorised them along with CPS of CHAI for arranging the supply of Indian made goods under the "daemed export scheme" for the project of health, social welfare, education, rural development, etc.

A Step Forward

In view of India's developing indigenous industry there is a great potential for expansion of CPS. As it is becoming increasingly difficult to export goods into India, even as donation, and in view of the problems of before and after sales service and spare parts, CPS can be considered a substantial step forward in local purchasing. The CPS could be further developed for providing information on matters relating to appropriate technology, materials aid, purchasing of all kinds of supplies like equipment, medicines, vehicles, etc., shipping and other concerns as may be required together with training and development programmes on materials management for the benefit of projects of social objectives.

It would be only appropriate if the existing infrastructure of CPS is thoroughly ex-

ploited for the procurement of supplies at all times within the country. Similarly, the CPS could also be exploited in handling products manufactured by rehabilitation centres of our institutions.

* * *

Basic Heath Workers Training Report of Nalgonda Diocese, A.P.

We commenceo our basic health workers' training on 3rd March, 1983. Twenty-three women from 17 (seventeen) villages along with 12 sisters participated in it. All these women were married people and they showed great enthusiasm and interest in learning the subjects which we taught them. In these three days we were very tight with our programmes.

After the theoretical training of three days we appointed them to different dispensarjes for practical training and meantime in group of five each they will come to Nirmala Hospital, Suryapet, for further theory and practicals in different departments, especially in maternity ward and labour room, for one week each group. During this period there would be the evaluation of the theory they already learnt as well as giving theory and practicals in other subjects.

At the end of this we decided to have a 3-day seminar for the whola group to share the experience and the result of their learning most probably on 27, 28 and 29 of May 1983.

* * *

Employment

Wanted MBBS Doctor, fresh, experienced or retired at Holy Cross Health Centre, Sanawad (M.P.) for immediate appointment. In view of starting a Maternity Centre we want a Gynaecologist. Accommodation and other facilities are available. Please contact:

Sr. Incharge
Holy Cross Health Centre
c/o Convent Deepalay
Sanawad, MP.. 451 111

Training Programmes by Indian Hospital Association, New Delhi.

The Indian Hospital Association, New Delhi, is organising the following management seminars:

1. *Management Seminar for Nurses*
   Date : 11th to 18th August 1983
   Place : Lady Hardinge Medical College School of Nursing New Delhi 110 001.
   Participants : Nursing officers from Government and Voluntary Hospitals.
   Tuition Fee : Rs. 250/- payable in favour of Indian Hospital Association.
2. *Seminar on Hospital Management and Administration*
   Date : 1—10, December 1983
   Place : All India Institute of Medical Sciences, New Delhi 110 029.
   Participants : Medical Superintendents, Health officers Nursing Superintendent etc. from Government and voluntary hospitals.
   Tuition fee : Rs. 350/- payable in favour of Indian Hospital Association.

For further details and registration, please contact:

Dr. P.N. Ghei
Secratary General
Indian Hospiral Association
C-II/72, Shajahan Road
New Delhi 110 011

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Promotion of Pro-Life Activities

A cassette of 60 minute duration (in Tamil) containing six select playlets and corresponding messages depicting the heinousness of abortion is prepared by Tuticorin Pastoral Centre and is available for the benefit of others. Price Rs. 25/- + Rs. 5/- for packing and postoge. Available from :

Fr. Stephen Gomez, Director, Tuticorin Pastoral Centre, Cathedral PO Tuticorin 1 Tamil Nadu