

Illegal Kidney Trade Booming in India

by Radhakrishna Rao

In March this year, the conservative southern Indian coastal city of Madras was shocked over the arrest of two leading transplant surgeons for their negligence that led to the death of both kidney donor and the kidney recipient.

Almost all the medical practitioners in Madras and elsewhere condemned the police action. But this episode served to shed light on the lurid going on in the illegal kidney market of the metropolis. Though the medical community is divided on the question of encouraging unrelated kidney donations, the lure of big money has caused many private clinics in the city to turn to the trade in kidneys.

Of late, Madras hospitals have been attracting renal patients from Bangladesh, Malaysia and Sri Lanka. A study conducted by the Pandalarthi Cardiothoracic Centre that screens potential donors revealed that they do it to pay dowry, settle debts or for self-employment. The doctor-broker nexus is so widespread that some brokers are said to have inter-state business. Furthermore, kidney dealers in Madras are said to be concentrating on larger, well known hospitals where they have free access.

The ethics team of the International Transplant Society which came to Madras something back on a probing mission came across a case where a city nephrologist despatched two cheques for handsome amounts to another doctor who had recommended

two kidney patients to him. Reliable sources also cited three cases of death involving a private clinic in the city, which were swept under the carpet. The three were treated as discharged against medical advice, to give the impression that the doctors were not to blame.

With a large impoverished population who are willing to exchange a kidney for the price of a radio or an alarm clock, India has become a major centre for the illegal kidney transplant trade, even attracting clients from other countries.

The emergence of Madras as centre for unethical kidney transplants is a recent phenomenon. Bombay has for many years now been the undisputed capital of unchecked underhand dealings in this vital human organ. The fact that around 1,000 unrecorded kidney transplants are performed annually in Bombay hospitals point to the indulgence of the medical fraternity in the trade.

It has been estimated that almost every agent and doctor involved in the deal makes a clean profit of Rs 100,000 (about US\$ 900) a month. According to consulting nephrologist Dr Ashok Kriplani, Bombay hospitals need an average of one kidney a day to meet the heavy demand for renal transplants.

Dr Shantilal Mehta, who helped establish a renal centre at Bombay's Jaslok Hospital, says, "This whole business of trafficking in human organs is abhorrent. I am ashamed to

call myself a doctor." Patients from the Middle East who make a beeline to Bombay for renal transplants sustain and support the burgeoning multi-million-rupee kidney business. Unable to receive transplants at home and unwilling to pay for expensive operations in the West, they

Arab patients invariably end up in the private nursing homes of Bombay.

The average cost of a kidney transplant in India is US\$7,000 — about 40% cheaper than a similar operation in the West. However, a couple of years back a Kuwaiti transplant specialist had in a letter to the Government of India complained that the unrelated transplants done on patients from the Middle East had shown poor results.

In the early 1980s, a British surgeon was appalled when he discovered, after performing two kidney transplant operations on Indian patients in England, that the kidneys had been bought from slum-dwellers in Bombay who had traded their kidneys for an alarm clock and a radio. The slums of Bombay continue to be a happy hunting ground for kidney brokers. Although the relatively educated respond to advertisements placed in

newspapers by brokers supposedly registered with the Government, they are ignorant of the tests and procedures for kidney donation.

From being closely guarded operation in the 1970s, the Bombay sales came into the open in the 1980s, prompting one sociologist to comment: "Perhaps no other country in the world has such a diabolical combination of advanced technology, impoverished people and an unethical section of the medical community to spawn a class of ruthless kidney merchants geared to poach on the poor."

The magnitude of renal failure in India translates into a need for around 80,000 kidneys a year. Urologists in India believe that cadaverous donations have immense potential and offer an easy way to counter the illicit sale of organs. But the lack of a comprehensive central legislation has made cadaverous transplant a non-starter in the country. Except in a few states like Karnataka and Maharashtra.

A campaign against kidney trading is being waged by the Kidney Foundation of India, which says that the motive of donors must be altruistic and "in the best interest of all concerned". Says kidney specialist Dr KM Chugh, "It is this business continues, most poor people in India will be minus one kidney by the year 2000." — Third World Network Features

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THE Textbook of Community Medicine and Public Health, the first book on medical sciences of international standard to be written and published in

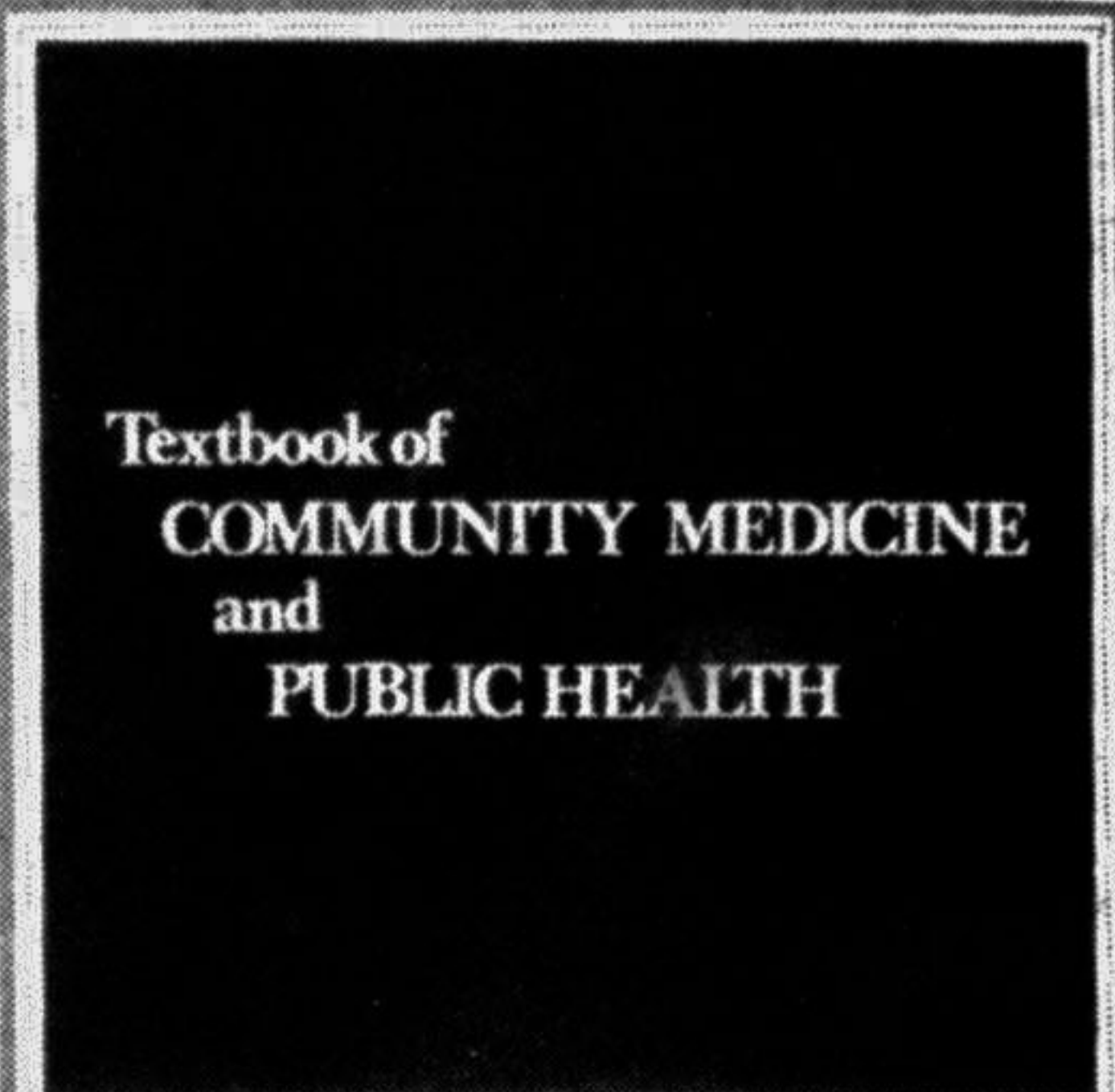
Textbook of Community Medicine and Public Health

By Rashid, Khabir, Hyder.

Published by RKH Publishers

Price : Taka 375.00

A Star Review



Rashid
Khabir
Hyder

Bangladesh, tackles areas of health care hitherto untouched or tentatively explored by other publications, in addition to traditional topics.

The three author-editors of the book, Dr KM Rashid, Dr Muhammad Khabir-ud-Din and Dr Syed Hyder, have tried, with a commendable degree of success, to bring out the concept of comprehensive health care, which encompasses the promotive aspect of the health system, in addition to the usual curative, preventive and rehabilitative sides.

"Promotion of personal habits and behaviour for a healthy living", as one of the editors described the promotive aspect of health care, is a relatively new concept and the book has put a great deal of emphasis on this.

Printed on high-quality white paper and laid out attractively which offers a relief from the usual drabness of such academic publications, the book is designed to appeal to, and be extremely useful for, a wide segment of the population, rather than only medical students.

The book is the product of collaboration between the three editors, all of whom are well-qualified health professionals with wide experiences both at the international and national levels, and 39 contributors who are actively engaged in the planning and management of the health care system, and in teaching.

By approaching public health within its social context, the authors have attempted to demystify medicine and make it more comprehensible. But the book also acknowledges that more socialisation would not help, unless the community itself assumed responsibility for its own well-being.

The book makes an attempt to provide information and education for building of the essential structures on which such an involvement of the community could take place.

The book starts with a discussion on the concept of positive health, and its various dimensions such as its mental, spiritual and social aspects.

The first chapter deals, in some detail, with the principles of administration, clearly indicating the emphasis the editors place on the importance of management and planning in community health care.

Just as important is the question of adequate financing because, in order to achieve the lofty goal of health for All by the Year 2000 or HFA/2000, a re-distribution of available resources is essential.

However, since it is not easy to strike a balance between existing allocations and

extra requirements, health officials should start to think about ways to generate new resources.

A whole chapter in the book has been devoted to the financing of health in Bangladesh at present. There is detailed discussion about ways in which the system could be re-organised to release resources for community health care.

For instance, while the present allocation of three per cent for health in the national budget is far too little, there is still no system of cost-sharing at government hospitals. People with the financial ability to pay are not charged, causing the hospitals to lose potential source of revenue, while poorer people who cannot afford private clinics have to wait.

The book also devotes a great deal of space to discussing how health care is approached in three Western countries with vastly different systems — the United States,

Britain and Sweden.

Due stress is laid on the twin topics of epidemiology and statistics — regarded by medical professionals as the ears and eyes of public health and community medicine. These two areas are vital because, without them, nothing in the field of planning can be done by health officials, working in managerial capacity.

A further chapter deals with the problem, traditional to developing countries, of locally-communicable disease.

However, non-communicable diseases such as cancer, diabetes and cardiovascular disease, normally associated with industrialised societies, are now becoming widespread in Bangladesh too. Recognition of this unpleasant fact has led the authors and editors to dwell on these diseases as well.

A separate chapter deals with what are known as special problems and programmes, because of the scarcity of resources, developing countries

such as Bangladesh are forced to concentrate efforts on some priority areas and develop special programmes to deal with such common problems as diarrhoea disaster preparedness

and response, leprosy, malaria, blindness, acute respiratory infection, extended immunisation programmes, drug dependence, accidents and AIDS.

Of these 11 areas, possibly AIDS is yet to become a priority area in Bangladesh, but judging by the speed with which it has spread in Africa, South-East Asia and India, precaution and public education have become essential here too.

These problems have been identified as priority areas for developing countries because doctors have to deal with such cases more often and in greater volume than others.

Mental health and medical sociology are also areas of high importance in the field of public health nowadays.

Cases of psychological disorder are increasing in developing countries in the wake of modernisation leading to a change in urban life-styles and mass migration from rural areas. At the same time, there has been increasing recognition over the years that socio-cultural and economic factors affect health, rather than any single cause.

Separate chapters have been devoted to these two, psychological and sociological, aspects of health in the book.

One important chapter in the book, given the fact that over 10 per cent of the country's population will be above 55 by the year 2000, deals with the question of care for the aged.

In the old days, the joint family could be expected to take care of the elderly. But that family structures are breaking up and the elderly are being left lonely and without support. This chapter discusses the special kind of care that will be needed to look after the aged people. The role that the Non-Government Organisations (NGO) could play in the field of public health is considered important enough by the editors to be given one whole chapter.

Although constrained by government regulations, the NGOs could undertake various projects and demonstrate the efficiency of their more flexible ways in providing health care. This chapter makes the point that NGOs could and should play a major role, to back up government efforts in rural areas.

In a nutshell, this book is not meant only for students of medical colleges. Most chapters will be of immense help to officials of the health care system at every level. People involved in planning and implementing community medicine and public health care will find the book extremely handy.

Vegetarians Lead A Healthy Life

by Dieter Schwab

ALTHOUGH the overwhelming majority of these vegetarians (58%) excluded meat, pates and fish from their diet, they still ate other food deriving from animals, such as dairy products and eggs, whilst a further 39 per cent permitted themselves the occasional lapse from their dietary regime.

Only the remaining 3 per cent were "ideologically sound" or vegans, the name given to vegetarians whose diet consists exclusively of vegetable foodstuffs.

All participants in this study clearly benefited from this form of nutrition. During the 11 years of observation, 235 of the 1904 subjects died — which statistically is 50 per cent lower than the fatalities among a comparable group of "normal eaters". The number of deaths caused by cardiovascular diseases, for example, from heart attacks or strokes fell among vegetarians — on average 50 per cent lower than the population as a whole.

The incidence of malignant tumours among male vegetarians was also similarly smaller and there were 25 per cent less cases of cancer among female vegetarians. Generally, the incidence of chronic disorders among vegetarians, such as Angina pectoris, high blood pressure or perfusion disorders is far less frequent.

The results of the Heidelberg study, in which Dr Jenny Chang-Claude, Dr Rainer Prentzel-Beyme and Ursula Elber participated, confirm the trend observed in the Berliner Vegetarierstudie by the Bundesgesundheitsamt (Berlin Study of Vegetarians by the Federal Office of Health) which was published in 1989.

This survey refuted the general fear that vegetarians are prone to certain deficiencies and demonstrated that their excellent health is due to their nutritional habits.

However, since the Berlin study was conducted over too short a time period, it was unable to provide reliable information on the average life expectancy of vegetarians.

Yet it would be wrong to attribute all the positive effects revealed in this study entirely to diet. Vegetarians generally maintain a more health-conscious life-style, and seldom smoke, for example — which may explain the conspicuously low incidence of tumours of the respiratory organs, such as lung cancer.

They also play sport more frequently, which can effectively prevent cardiovascular diseases and may account for the lack of weight problems among the subjects. A further interesting obser-

Vegetarians not only enjoy above average health but also have a higher life expectancy. By cutting meat from their diet they protect themselves particularly against cardiovascular disorders — the cause of every second death in the Federal Republic of Germany.

vation is that non-meat eaters are often highly educated and engaged in responsible academic, technical or social professions — which — in statistical terms — is an important factor in prolonging life expectancy.

Yet a low-fat, high-fibre vegetable-based diet not only helps to maintain low blood pressure and normal chole-

sterol levels but it also benefits the kidneys, which function better, and reduces the risk of gout. Conversely, eating meat in large quantities may even increase the risk of cancer as it stimulates the secretion of gallic acids in the bowels which can promote the growth of cancer, and people with a high fat-intake are twice as likely to suffer from bowel cancer.

Vitamins which are eaten in great quantities by vegetarians in fruit and vegetables, may also afford protection against some cancers. For example, Vitamin C inhibits the production of the carcinogenic nitrosamines in the stomach.

The study also reveals that an overzealous attitude to diet can also be harmful — the occasional juicy steak will probably do more good than harm.

Since their one-sided diet can lead to deficiencies, strict vegetarians have a lower average life expectancy than those of a more moderate persuasion. A balanced diet is therefore more important than a restricted one.

(German Research Service)

A Fundamental Discovery in AIDS

by Gilles Rousset

Scientists believed they knew the most important facts about AIDS. The virus directly attacks the lymphocytes, that is to say the defence system of the human organism and the latter, at the mercy of the least aggression, can no longer resist and dies at the slightest infection.

Yet, a major puzzle remains : why, in some cases, does the disease break out immediately, while, in others (and the most frequently), the virus only makes its harmful effects felt after a very long time which can take years?

This mystery has now been solved by Professor Montagnier and his team at the Pasteur Institute. In a recent address at the Academie des Sciences, Pr Montagnier demonstrated, in detail, a new way the virus works. Its means of action is

far more complex than was suspected until now.

The HIV virus acts in two ways. It either massively attacks the T4 lymphocytes, proliferating in thousands, penetrating the cells and destroying the defences of the organism which rapidly develops AIDS. Or it is contained and remains inactive and dormant without having an immediate effect on a person, even though he is a seropositive AIDS carrier.

However, in the long run its effects manifest themselves. How can this be explained when the virus appears to have become inoperative?

After discovering the HIV virus in 1983, Pr Montagnier continued his research intensively in order to learn more about this dreaded virus and thus to be able to take action

against it.

One of his most important experiments, carried out "in vitro", consisted in studying healthy lymphocytes (ones not infected by the virus), belonging to sero-negative subjects (or non-carriers of AIDS), as well as those of seropositive patients (AIDS carriers) not presenting any symptoms or people who were already affected by the AIDS disease.

It was thus discovered that the non-contaminated lymphocytes of seropositive carriers were already less resistant and ended up annihilating themselves although there appeared to be no link with the virus. The whole interest of the discovery lies in the way the lymphocytes are destroyed : "We have shown," Pr Montagnier explained, "that the process leading to the cell

death of lymphocytes took place by apoptosis".

There are two ways for a cell to die: either by necrosis, which is the standard way, or by apoptosis. Cell death by apoptosis was discovered in 1980. "It corresponds to death by programmed suicide," Pr Montagnier explains, "a phenomenon internal to the cell leading to the cell's DNA (genetic material) being cut up into many fragments". In itself, apoptosis is a natural phenomenon. It is used by the organism to eliminate cells which have become harmful.

Why does this particular phenomenon of the gradual destruction of healthy lymphocytes occur in the case of seropositive carriers when there is no sign of any interaction with the virus? At the moment, scientists are reduced to hypotheses. The viral infection could set off a process leading to cell death by apoptosis, but just how remains to be discovered.

If this discovery explains how the disease finally sets in (owing to the slow decrease in the number of lymphocytes), despite the long period which can, without any apparent inconvenience, follow infection by the virus, the major point of interest lies in the prospects of therapy it opens up.

It is, in fact, possible to prevent cell death by apoptosis, by using lymphocyte "growth factors", called cytokines.

In other words, these biological reagents, which were not used in the "in vitro" experiments, could be used with seropositive patients to prevent the death of the cells which are essential for the immune system to function correctly, that is to say to halt the development of clinical AIDS. It is thus a fundamental discovery, concerning ten million seropositive AIDS carriers in the world.

Need for killing to save

by TV Padma

INDIAN surgeons are reporting success with cryosurgery — the selective destruction of tissues by freezing them — in the treatment of certain cancers of the head and neck.

Doctors at the Lok Nayak Jaya Prakash Narain (LNJPN) Hospital, New Delhi, who performed cold surgery in nearly 100 patients reported that the technique has immense potential in some well-selected cases.

The results were presented by former head of the ENT department at the hospital, Dr Prem Kakar, at the sixth overseas conference of the Royal College of Surgeons, Edinburgh, held in New Delhi in February.

During cryosurgery, doctors simply freeze the diseased tissue using coolants like liquid nitrogen and nitrous oxide and then thaw it slowly. Freezing causes direct cellular damage and microcirculatory failure, sloughing and healing. The dead tissue simply detaches itself from the rest of the body and falls off.

However, the technique can only be applied in superficial precancerous, benign and cancerous lesions, which are "within the reach of the surgeon's fingers and where a probe can be comfortably applied", Dr Kakar told PTI Science Service.

It cannot, for example, be applied for lesions within the chest and abdomen cavities or those located deep inside the brain.

The LNJPJ team head by Dr Kakar performed cryosurgery in 99 patients, of whom 37 had pre-malignant lesions, and 62 had advanced, malignant cancers in the ears, nose or tongue.

After cryosurgery, all the 37 pre-malignant cases and 45 out of the 62 malignant cases were disease-free even after five years.

In the remaining patients

with malignant, advanced cancers, cryosurgery provided tremendous relief from pain, besides reducing the tumour size.

The machine used by the LNJPJ team was fabricated by the National Physical Laboratory (NPL), New Delhi, and comprised a big, six-foot-high cylinder containing the coolant nitrous oxide, a silver probe

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the size of a pencil and a tube connecting the two.

The tip of the probe can be of various shapes and sizes depending on the tissue to be destroyed. The more rapid the freezing and slower the thawing, the better is the destruction," Dr Kakar said.

The LNJPJ team employed the "triple freeze thaw" method where they froze the tissue for three to five minutes, and thawed it slowly, for three cycles.

Practitioners in Britain too have reported success with cryotherapy in the treatment of a variety of malignant and non-malignant lesions, with good cosmetic results. The cooling agent used in this case was liquid nitrogen, one of the most effective and widely used cryogens.

There is no universal agreement on what temperature is lethal to cells. Nevertheless doctors agree that while 0 degree Celsius does not kill the cells, minus 25 degrees

Celsius is adequate and minus 60 degrees effective, according to a report by Dr Andrew Burnett in "Practice Update".

The LNJPJ doctors freeze the tissue to minus 80 to minus 90 degrees Celsius almost instantaneously.

Most tissues can be treated in a single sitting, while in some very advanced cancerous lesions, the process may be repeated two weeks later after the dead tissue has been removed.

In the case of large lesions, the probe may be applied at a number of sites for complete destruction of the tissue. The extent of ice formation under the probe indicates the amount of tissue being subjected to cryosurgery.

Suitable conditions that can be treated include warts and verrucae, skin tags, skin lumps and cysts, benign moles and some carcinomas, Dr Burnett says.

It is important to freeze only the desired lesion and not involve the underlying tissues such as nerves, tendons, cartilage, glands and the eyeball. These can be avoided by retracting the desired tissue, (for example, the eyelid or the tongue) or by lifting the iceball clear while it is stuck to the probe during the freezing process.

Lumps, and vascular lesions with important underlying structures are best treated with closed probes which adhere to the skin in a process called cryoadhesion which occurs when the probe freezes the water on the skin surface. Having achieved cryoadhesion, the probe is pulled back to separate the advancing ice ball from the underlying tissues.

"It is also effective in only some well-selected cases where it is a safe, effective and cheap method mode of treatment," he stressed. (PTI Science Service)

