Treatment of Coronary Heart Diseases in Bangladesh

by Dr Habibur Rahman

HEART is a pumping muscular organ which always pump or supply blood to the other parts of the body. Heart Muscle itself needs blood supply for its nutrition. This blood supply comes by the coronary artery. When the coronary artery gets less blood supply or not at all to the heart muscles then doctors call it a heart attack or myocardial infarction.

Why does the less blood supply or total obstruction to one or two coronary arteries occur. The reasons is Atherosclerosis which is a degenerative process occurring with increasing frequency with advancing age. Athrosclerosis may begin early in life. Coronary arterial injury occurs by elevated pressure, deposition of lipid and infiltration of hypertrophied smooth muscle cells leading to obstruction of the coronary artery.

There are some risk factors in the development of coronary heart diseases these are :

a) Hypritipidemia : Increased lipid concentration in blood due to increase in take of animal fat.

b) Hypertension: Hypertension increases the filtration of lipid from plasma to the intimal cells by virtue of increased arterial pressure. Hypertension may injure the intima of arterial wall, leading to platelate aggregation and obstruction to artery.

c) Diabetes: Atherosclerosis occur more in Uncontrolled Diabetic person.

d) Smoking: Smoking is a definite risk factor in promoting atherosclerosis. and smoking reduces serum HDL cholesterol which is beneficial. Smoking reduces the oxygen supply to the heart mussel.

e) Age: Old people are affected more than young.

f) Sex : Male are affected more than female.

g) Oral Contraceptive: Prolonged use of oral contraceptive for more than five years.

h) Physical inactivity. Physical inactive people are more susceptible to suffer from coronary heart diseases.

i) Personality: Those who are competitive and aggressive. Coronary disease patients may present various clinical manifestations. Such as: 1) Chest pain —starting from the left side radiate to left arm and hand, neck, even and to the throat and lower part of the face.

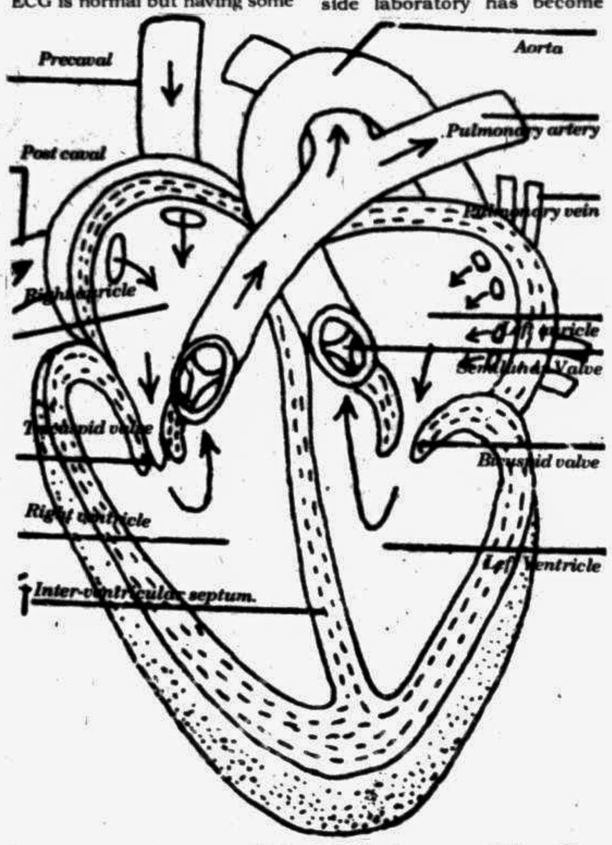
2) Some time a patient may come to doctor with epigastric pain and chest discomfort heaviness and tightness of chest.

3) There may be sweating only.

4) Patient may be asymptomatic.

5) Patient may come with complications of different type of Arrythmia Artrioventrioular conduction defects.

Doctors can diagnose the coronary heart diseases by electro cardiogram (ECG) with some investigation of blood ehzymes. ECG can not give the final diagnosis of coronary heart diseases. ECG maybe normal. In that cases doctors should proceed for more investigation when a patient's ECG is normal but having some chest pain. In that case ETT should be done.



In our country these test is done in NICVH. But in some cases ETT is positive but patient is asymptomatic. In that cases doctors should do Thallium – 201 Scintigraphy Test. This test is very expensive and it is not done in our country. And this test is done to anatomically localize the region of isechiemia. And to distinguish ischemia from infarcted myocardium.

Echocardiography

It is available in Bangladesh which is necessary to see the left ventricular global and regional function.

Radionuclicle angiography

It is a very expensive investigation which is not available in NICVD. It is necessary to demonstrates akinesia or dyskinesia in areas of infarction and also to measure ejection fraction.

This continuous electro cardiographic monitoring out side laboratory has become standard means of identifying arhythmias and conduction defects. One lead of an ECG is usually recorded on a tape recorder that is strapped around the patients waist. And the patient is advised to go outside the hospital for his normal work for 12 hours. Then the tape recording of the ECG is played back at speeds of 10 or 100 times the recording speed and scanned for abnormalities, using a special computer programme. Both arrythuia and ischaemia can be detected in this way and the time of their occurrence correlated with events in the patient's life. This instrument is not so much expensive for a country but it is not available in hospital like NLCVD, or any hospital or private clinic of Bangladesh. During the establishment of NICVD, there was a Holter monitoring machine but now it is out of order.

This is done only in NICVD. This test is done for final diagnosis of coronary artery disease. This test is usually done before PTCA and coronary artery by-pass grafting to see the coronary artery occlusion. Investigations like magnetic resonance imaging (MRI), cardiopulmonary function testing, bedside swan ganz catheter, which is not available in our country.

The treatment given NICVD and other hospitals and recently established heart foundation hospital is to prevent the complications and to relieve the chest pain only.

Thrombolytic therapy

There are some injections such as streptokinas, urokinase, TPA, RTPA. If these, injections are given within hours of pain. Then there is a 40-60 per cent chance of removal of blockage of coronary artery. If these injections are used then, doctor, can save the patient from PTCA and CABL which is very very costly.

The price of these injection ranges between Taka 6,000 to 20,000. Recently these injections are used in CCU of NICVD. The government should import these injections so that a large number of patients can use these injection at a cheaper rate.

Pereutaneous Transluminal Coronary Angioplasty (PTCA):

In this procedure under local anaesthesia a small incision is made to open the femoral artery and a specially designed catheter having a non elastic ballon mounted close to its tip is introduced to the site of a coronary artery sclerosis and inflated more by giving atmospheric pressure from a special designed machine. By this way coronary artery sclerosis is removed for remorming this technique a standby cardiac surgical team is required. Coronary Artery bypass Grafting (CABG): This is not available in our country.

Role of Military and Industry in Environmental Health

by Rosalie Bertell

MOST of our environmental crises derive from military excess. We rarely hear about what it means to have set off 2,000 nuclear bombs on this planet. What does it mean to have done all this uranium mining, milling and transport? What does it mean to have 430 operating nuclear power plants in the world routinely releasing radioactive material in the air, the water and the land and producing waste that we do not now how to get rid of?

What does it mean to have spent years developing and using pesticides, defoliants and herbicides, basically for killing the jungle in Vietnam? These were war measures, instruments of mass destruction.

What does it mean to proliferate our means of telecommunications rather recklessly, including such technology as high tension wires, radar and video display terminals which are produced in the cheapest way but are not necessarily environmentally sound or protective of human health? These are military communication systems which have been moved into the commercial sector.

In all the discussions of the greenhouse effect there is little or on mention of military space programmes. Few are aware that the military has deliberately burned holes in the ionosphere, or that Canada participates in programmes whereby rockets release chemicals into the upper stratosphere to find out what happens up there. I read a Parliamentary document which explained that none of these experiments with the ionosphere and the upper atmosphere caused any environmental problems. The basis for this conclusion was twofold.

Firstly, the scientists who conducted the experiments did not see any problems and secondly the public did not object. Those were the two reasons given in this official document, and I am not exaggerating. Because the space programme remains outside of discussions regarding the ozone layer or carbon dioxide, your ability to make decisions or even think about the issue is severely restricted by lack of information.

The public should demand that every military programme be made known and submitted to an environmental review. We do have to include the military in every environmental question.

My second point is that the problem we are experiencing in the environment has to be linked with the problem in the workplace. Earlier in the industrial age, workers became aware of the fact that their health was compromised by the profit motive, by the push for efficiency and because of unknown hazards in the workplace.

The tendency to blame the victim is very strong. I have been working in cancer research now for more than 20 years. In the early 1970s, researchers claimed that 80-90% of cancers were due to the environment. Then the role of the environment was divided into two parts. One was environment you were able to avoid — 'lifestyle' — and the other was environment that was unavoidable.

Renowned health expert Rosalie Bertell points out that military activities are a crucial though not well-known source of environmental crises. She also argues that corporate behaviour rather than lifestyle causes health problems.

The main lifestyle causes of cancer are smoking, eating fatty foods and sitting out in the sun. Who has considered how much of the hazards in cigarettes are due to environmental pollution? Cigarettes come from tobacco which picks up both air pollutants and, primarily, the pollutants used in fertilisers, laden with uranium and uranium products.

One of the most hazardous products is polonium 210, a radioactive material. The growing tobacco leaves pick up this polonium 210 in the tar. It is not water soluble so after smoking the cigarette, polonium 210 sticks in your lungs for 10 days before the water system of the body can wash it trough.

No one calls a cigarette radioactive, but that little particle sitting in your lung for 10 days radiates the cells around it and can initiate a cancer. Who is going after the tobacco producers? Who is saying to the public that today's cigarettes are more hazardous than cigarettes were in the 1930s? How many young people have you heard say, 'I know this elderly person who has always smoked and they do not have cancer'? Are people being told that cigarettes are worse today than years ago, or are they just made to feel guilty?

The same pattern relates to the eating of fatty foods. Most of the carcinogens in our environment are fat soluble rather than water soluble and therefore are stored in animal fat. Fat does not hurt you. It never did and it probably never will. But if the fat is incorporating carcinogens then obviously consumption of fat will increase your consumption of carcinogens. Rather than holding polluters accountable, a campaign is targeted at the public with the message 'don't eat fat'.

This brings me back to the model of addiction. When one person in a family has an addiction problem, it is not uncommon for everyone to walk around the problem and modify their lifestyle so as not to confront the addicted person. We are doing exactly that as a society. We are confronting the individuals and changing our lifestyle rather than confronting the polluters.

In order to influence the environmental movement at a deeper level, we have to do some basic things. One is to develop cooperative models among our own groups. We have to learn skills of consensus decision-making and effective non-violent tactics. We have to learn how to resolve conflict without using force. This is directly counter cultural. It will not be easily accepted by major decision-makers, but it must be learned if we are going to survive peacefully. Skills for a new society must be learned because our past society with its violence has led us into problems consequent to violence and abuse of control.

The process of decision-making must include women and indigenous people if we are going to find ways out of the environmental crisis. We cannot just use lobbying as our effort. We have to fight information with counter information. The most sensitive indicator of environmental health is human health; we have to demand human health monitoring systems.

The regulation of radioactive and chemical pollution is currently set by the polluting industries themselves. The risk is always life and health. Life and health are being traded for money, political power and private gain. We need much better collection of health data. Collection is now based on problems of the past, such as infectious diseases and ptomaine poison in restaurants, rather than on problems relating to environmental health.

Our present method of compensation for damage to health is based on the model used by the labour unions. Winning a compensation suit means your medical bills are covered and losing means nothing is covered. But we can usually measure the proportion of illness due to environmental hazard. For example, if we can collect information properly, we can hold industry 'X' responsible for 10% of the lung cancers or 40% of the leukemias. We could then require that 10 per cent of the bill for lung cancers be paid by the polluter. I am calling for proportional retribution.

Companies calculate health costs in dollars and cents, that is, the expense of workers' compensation and lost law suits. Until the real, full cost of health is captured in terms of money and assigned to those responsible for contributing to those costs, it will be devalued and remain outside of the decision-making area. — (Third World Network Features)

Rosalie Bertell is a scientist and mathematician who has worked for 20 years in the field of environmental health. She is President of the International Institute of Concern for Public Health, and takes her expertise in radiation, cancer and birth defects to communities and individuals around the world whose health is threatened by military and industrial pollution.

Population Boom in Sikkim

THE tiny Himalayan state of Sikkim is undergoing a population explosion. With an area of barely 7,096 square kilometre, the state now has a population of well over 400,000 — an average of 57 per km.

The last (1991) census, which placed the figure at 405,505, reflects a growth rate of 27.57 per cent during the past decade (1981-91). This compares with the population growth of some of the larger Indian states like Rajasthan (28.1 per cent), Madhya Pradesh (26.7 per cent) and Uttar Pradesh (25.2 per cent); but what has taken demographers most by surprise is that the rural people who make up 90.88 per cent of the population of Sikkim, have increased by 38.91 per cent during the period.

There are causes other than a high fertility rate and low mortality that account for the phenomenal growth in population.

Sikkim is a polyethnic state. Nepalis constitute majority community totaling to about 70 per cent of the population, while Lepchas and Bhutias together constitute 25 per cent. The remaining 5 per cent are "plains people" — immigrant from northern Indian states who are in Sikkim purely for trade and business.

The Lepchas and Bhutias are Buddhists, while the Nepalis are mostly Hindus. Now Tibetan Buddhism, as practised in Sikkim, reduces fertility levels in a community, as a large number of male children enter the monastic profession which prohibits marital relations. Secondly, Bhutias practice polyandry — a cultural legacy from Tibet — which also reduces fertility.

Among the Lepchas and Bhutias, marital customs require a heavy bride price which inevitably leads to a late age at marriage. As such, these communities can scarcely be held responsible for the high fertility rate and the consequent population boom in Sikkim.

So far as the Nepalis are concerned, the custom of bride price is not so rigid and as such most of them marry early. Morcover, instances are not lacking of a Nepali male having two or more wives. The British are said to have encouraged this practice as a means to offset the growing Tibetan influence on Sikkim. Besides, the immigrant Nepali population required extra labour to clear large tracts of forest land for habitation and agriculture. Nothing could be more economical than having more wives and children for these early settlers.

By 1891, when the first census was conducted in Sikkim, the Nepalis had multiplied to a point where they constituted 63 per cent of the total population of 30,458. Thereafter, while their numbers increased phenomenally, the overall population of the state recorded a very erratic growth.

The economic advantages accruing from such provisions are being exploited by the people and in turn influencing decisions in favour of large families. For ultimately, with greater security, better income distribution and a sound base for subsequent agricultural progress, farmers are bale to afford larger families.

For instance, while the growth rate of Sikkim's population between 1911 was 48.98 per cent, in the next decade it dropped to minus 7.05. Thereafter, between 1921 and 1931, it shot up to 24.37 per cent and then dropped to 10.67 per cent during 1931 and 1941 to rise slightly to 13.34 per cent in the following decade.

With developmental activities picking up in the region since 1954, growth rate started climbing to 17.76 per cent in 1961 and during 1961-1971, it went up to 29.38 per cent.

Recent land reforms have also contributed to the prevailing population boom. The Sikkim Agricultural Land Ceiling and Reform act, 1977 provides for land holdings proportional to family size, provided the buyer can afford it. The legislation specifically prescribes that a single person or a family unit consisting up to five members can possess 12.5 acres of land, and in the case of a family consisting of more than five members the basic 12.5 acres unit is increased by two standard acres for each additional member upto a 20.5 acre limit.

The economic advantages accruing from such provisions are being exploited by the people and in turn influencing decisions in favour of large families. For ultimately, with greater security, better income distribution and a sound base for subsequent agricultural progress, farmers are able to afford larger families. This is clearly reflected by the fertility behaviour in rural areas.

Apart from a rise in fertility rates, other plausible factors contributing to a steady population growth in Sikkim are the continuous stream of illegal immigrant from Nepal, migration from the adjoining Darjeeling district of West Bengal and the development as well as investment opportunities available, especially after this former kingdom became an Indian state in 1975.

Illegal immigrants who now number around 60,000 may soon be granted Indian citizenship. There are political considerations behind this move taking into account resentment expressed by the ethnic minority of Bhutias-Lepchas towards Nepali dominance numerically political and economically.

It needs to be emphasised that the Government's decision in this regard would not only influence the demographic future, but also set the terms for India's political stability and development strategy well into the next century.

After all, development is recognised as a rational utilisation of the nation's human and physical resources whereby poverty can be eliminated, education becomes universal, diseases are brought under control and standards of living bettered. In the case of Sikkim, which cannot produce even one-third of its food requirement, development may not be possible until the population growth is checked. Poverty contributes to high mortality and even higher fertility. To prevent such a situation from arising, it is imperative that health care services and other development measures are intensified along with access to family planning services.

— *(PTI Feature)*

AIDS Specter Looms over Middle East

by Mounir B Abboud

Unless action is taken immediately, 'AIDS could pose a public health problem of epidemic proportions' in the Middle East

IN a recent meeting in the Philippines, William H Draper III, administrator of the United Nations Development Programme (UNDP), warned against the "lengthening shadow" of AIDS of Acquired Immune Deficiency Syndrome.

Mr Draper reported that the deadly disease and its precursor – infection with the HIV virus which causes AIDS — were already threatening the lives of millions of Asians as it spread at 'a tragic and potentially catastrophic rate putting progress in human development at risk."

Just how far AIDS has cast its deadly shadow is seen in the near-hysteria now gripping the Arab world as three countries confirm at least three deaths from the dreaded disease. AIDS cases are also reported in several other Middle Easter-nations.

The situation has Arab countries scrambling to implement very astringent measures in a bid to keep the fatal disease at bay. Kuwait, host of a recent regional meeting on AIDS, is at the forefront as the site of a regional centre that will lead the battle against the devastating illness

AIDS breaks down the body's immune system making a person vulnerable to a host of infections. So far, there is no known cure against the fatal disease although some drugs have been developed to slow down its progress. Vaccines to prevent it are currently undergoing tests.

Fatal cases of AIDS in the Middle East were reported by Lebanon, Sudan and Saudi Arabia. The victims appeared to have contracted the disease while living overseas.

The Lebanese victim, a 34-year-old man who died in a Beirut hospital, had lived in San Francisco, United States for six years. He found out he had the fatal ailment when he returned to Beirut. Doctors in Lebanon are certain he contracted the disease in the US.

The 43-year-old Sudanese victim had been living in Denmark for 10 years. He was in Khartoum only to visit his children when he found out he was afflicted with the dreaded disease. No details were available on the Saudi Arabian victim.

In addition to these deaths, statistics complied by the World Health Organisation (WHO) show that AIDS cases are mounting in the eastern Mediterranean region which covers 22 countries, including all the Arabic nations.

Reports received by WHO's eastern Mediterranean regional office as of Ja. 1, 1992 indicated that AIDS cases grew from 236 for the period 1979-1988 to 269 for the year 1991 alone. The most number of cases in the region, so far, were registered in 1990 when there were a total of 297.

Sudan has consistently led the region in the number of AIDS cases. For the period 1979-1988, it registered a total of 66 cases. In 1989, it had 122 cases; 130 in 1990; and 158 in 1991 for a total of 476.

Djibouti had the next highest total number of cases in the region from 1979 to 1991 with 104, followed by Morocco with 90 and Tunisia with 82. All the other countries in the region have a total of less than 50 cases each so far.

With the AIDS threat growing every day, participants in the Kuwait AIDS conference drew up a regional strategy to combat the disease. They discussed evidence suggesting the AIDS virus can be transmitted via the saliva and semen. The experts noted that people most at risk include homosexuals, haemophiliacs, drug addicts and recipients of infected blood transfusions.

'Drug users and prostitutes are the source of AIDS'

Several preventive measures were introduced in the Arab world following the Kuwait conference. These measures include medical screening of immigrant workers and foreign visitors; stricter checks on local blood donation and, in some countries, a ban on uncertified imported blood; and educational programmes via public health authorities and the mass media.

Most Arab countries have already started screening both local and imported blood supplies for infection. In Jordan, Syria, Bahrain, Qatar, Oman and Yemen, health authorities have told hospitals not to accept imported blood unless it is certified free of the AIDS virus.

The United Arab Emirates has given instructions for the screening of migrant workers, particularly cooks, domestics and waiters who are likely to have frequent contact with local families. The government has also ordered checks on "selected" hospital patients.

In a note circulated to foreign embassies in Iraq by the foreign ministry, the government has announced that all visitors to the country will be required to submit to AIDS detection tests. The ministry said the measure was being taken to"prevent the entry of AIDS into Iraq," a country of 15 million which claims to be free of AIDS so far (the WHO eastern Mediterranean regional office, though, listed seven AIDS cases in the country in 1991 as of Jan1, 1992).

The ministry said all visitors — "Arabs and other nationals" — would be required to report to assigned hospitals within five days of entry to obtain health certificates.

Saudi Arabia is also checking migrant workers. In a bid to prevent Saudis overseas from contracting the disease, the government is handing out "awareness cards" to nationals leaving the country.

In Kuwait, sophisticated equipment previously available only in the US and some European nations has been installed at the country's central blood bank to check all blood donations, local and imported.

As host of the regional centre which will lead the Arab world's fight against the deadly AIDS , Kuwait will be relying on assistance from international agencies. Dr Rashid Uwaish, the director of public health and training in the country, said specialised equipment for diagnosis of AIDS is to be installed soon. When the equipment is operational, Kuwait will collaborate with WHO is the training of technicians from Arab countries for the primary investigation of AIDS cases.

Another possible source of assistance is UNDP which, as indicated by Mr Draper during the Philippine meeting, is talking and supporting major initiatives against AIDS in view of its potentially disastrous effects on development efforts. Mr Draper stressed UNDP's intention to address the problem on a wide social and economic front.

UNDP recently established a HIV and Development Programme to coordinate and provide policy and programme guidelines for the agency's work related to the AIDS epidemic. The new programme will manage UNDP resources directed towards the epidemic. It will assist in community-based approaches in monitoring and evaluating the disease.

Working closely with WHO's Global Programme on AIDS, other UN agencies, bilateral donors, national governments and non-governmental organisations, the new office will help increase national and global awareness of the implications of the epidemic on human, social and economic development. It will also disseminate research and identify experts.

The Arab world's concern over AIDS could not have come too soon. An American expert had already sounded an alarm about the disease's potential to devastate the region.

Dr Clifford Lane of the US National Institute of Allergy and Infectious Diseases, in a symposium at Saudi Arabia's King Faisal Specialist Hospital, said that unless action was taken immediately "AIDS could pose a public health problem of epidemic proportion" in the region.

— *(Depthnews Asia)*