

GREEN GOLD

A big question has arisen in front of almost all the countries including India. The question is, what should be used instead of fossil fuels? Pollution is increasing due to fossil fuel.

These fuels are also not long-lasting, so the idea is to replace 'black gold' with 'green gold' i.e. biodiesel or vegetable oil instead of oil. This suggestion is being taken seriously in India, as we are heavily dependent on imported oil. Presently 73 percent oil comes from outside. By 2025 this figure will be 85 percent.

At present, the demand for diesel in the country is five times more than that of petrol. Rapid economic growth has meant that more people are traveling than ever before and that there is a greater volume of freight. At present also 80 percent passengers and 60 percent goods go by road.

In 2002, the central government prepared a roadmap for the use of bio-fuels in India. He made it mandatory to add a bio-fuel - ethanol to petrol, but it could not be implemented, because it is becoming difficult to get ethanol. Now bio-fuels are being promoted, so that they can be used in large quantities.

Petrol and diesel dominate the world today, but remember that Rudolf Diesel originally designed his revolutionary compression engine to run on vegetable oils. Modern vehicles do not run well on vegetable oils. They corrode engine parts, so the right way is to chemically modify vegetable oils and convert them into biodiesel, which is similar to normal diesel.

At present, the availability of non-edible oils and oilseeds is limited in the country. Their plantations have been established in the states, but it will take two-three years to get sufficient amount of oil from them for bio-diesel. The question is, how much green diesel does India expect to make in the coming years? The Energy Research Institute (TERI) estimates that by 2030, only 40 percent of the country's need for green diesel will be made, but even for this there is a long way to go.

INDIA-PAK DIALOGUE

K.V. SEETHARAMAIAH

Need for India-Pakistan dialogue has revisited with the realization of Pakistan Prime Minister Shehbaz Sharif that war is no option. This is indeed a pragmatic view. War does not benefit anybody. Warring nations have everything to lose but nothing to gain. Even powerful countries lose to some extent. It is sensible when Sharif said "God forbid, if there is nuclear flashpoint, who will live to tell what happened?" In the past, Pakistan squandered away the opportunity to hold dialogue when Narendra Modi offered for dialogue soon after he took over as Prime Minister in 2014. Pakistan PM says that despite being a nuclear power, Pakistan is not an aggressor and has nuclear facilities only for defence purposes. Vajpayee time and again said that there will be no first-use of nuclear from Indian side. It means the nuclear power is meant for defence purpose only. If both the nations maintain the same stance for ever, there will no occasion at all to press the nuclear button. Now the governments in Pakistan and India have changed and the people at the helm have also changed. The initiative for dialogue is not unwelcome. India has been consistently maintaining that the Pakistan-sponsored terrorism from its soil against India must stop as a precondition for dialogue. Pakistan is under illusion that terrorism can get what it wants. Dialogue on trade and many other aspects may bear fruit. But on Kashmir issue, Pakistan believes that Kashmir should belong to them for the reason that the Muslims are in majority in Kashmir. Kashmir was once a predominantly Hindu state. India is firm that the Pakistan-occupied-Kashmir should come back to India. Hostility between the two neighbours continues so long as Pakistan does not give up its claim over Kashmir. Therefore the dialogue covering Kashmir aspects remains an exercise in futility. As in the past, the US has been backing the dialogue between India and Pakistan. Many times in the past many countries including the US and UK have offered to mediate in the matter for facilitating dialogue and resolution of the Kashmir issue. India has rightly rejected the mediation offer since it is the bilateral matter between India and Pakistan. If terrorism has reduced in Kashmir it is because of the terrorism dealt with iron hand by the Modi dispensation, not because saner counsel has prevailed on Pakistan to stop the terrorism emanating from its soil. Relationship between neighbouring countries should be good. Relationship always strains on boundary and water issues. Boundary and water are such issues that they strain the relationship between district to district, state to state and country to country. Former Prime Minister Atal Behari Vajpayee has aptly said that friends can be changed but not the neighbours. It is literally true in the case of nations. But in the case of individuals, neighbour can be changed if such individuals shift to some other place. Dispute always largely arises among the neighbours only. A nation far away from other nation would have hardly any chance for dispute. The US call for Indo-Pak dialogue is good. At the same time, the US would do well to advise Pakistan to sort out all the differences with India after giving up its demand for Kashmir which India cannot countenance.

DR SARTAJ AHMAD GUROO



Introduction: Congenital heart diseases (CHD) are the most common and serious structural birth defects which affect both the heart and major blood vessels. CHD are a major economic burden to society in general and to the family in particular. These patients may require multiple surgeries for the correction of the defect so accordingly need frequent hospital admissions. The surviving infant may still have to live with the disability. Congenital heart disease is the main cause of infant mortality worldwide while in India about 10% of infant mortality is attributed to CHDs. The incidence of CHD ranges from 0.8 to 1% live births which means approximately 1.35 million newborns are born with CHD worldwide while in India the estimated number of children born with CHD every year is approximately 2,40,000. The incidence of CHD is highest in Asia. Despite the significant geographic variation, the prevalence of CHD has remained relatively stable. The prevalence of CHD is high in developed countries. With advancements in diagnosis and medical management, 85% of people with CHD live up to adulthood. Post-surgery survival is even more than 97%. CHD is known to have important effects on brain development resulting in neurodevelopmental or neurocognitive defects.

Classification: Congenital heart defects are classified as follows: Acyanotic congenital heart disease and Cyanotic congenital heart disease.

The acyanotic congenital heart disease are further subdivided into shunt lesions (Atrial septal defect, Ventricular Septal Defect, Patent Ductus Arteriosus) and non-shunt lesions (Aortic Stenosis, Aortic Regurgitation, Pulmonary Stenosis, Mitral Regurgitation)

The Cyanotic congenital heart disease are further subdivided into following categories

1. Reduced pulmonary blood flow like Tetralogy of Fallot (TOF), TOF equivalents

2. Increased pulmonary blood flow like Transposition physiology, Intercirculatory mixing

3. Near normal pulmonary blood flow like Pulmonary arteriovenous fistula, Anomalous drainage of vena cava to left atrium (LA).

Etiopathogenesis of CHD: Only in 15 to 30% of CHD patients, the potentially modifiable cause can be found while in the rest of the cases, the etiology is either multifactorial or unknown. Infections like Rubella, or any febrile illnesses during the first trimester of pregnancy increases the chances of CHD by 2-fold in the offspring. Therapeutic (Thalidomide, Metronidazole, Trimethoprim-sulfonamide, Isotretinoin, Antiepileptic Drugs, Fluconazole, Lithium, Chemotherapy, Clomiphene etc) or non-therapeutic (Cocaine and Marijuana) drug exposure during the first trimester of pregnancy increases the chances of CHD. One percent of CHD can be due to maternal medical conditions such as Diabetes Mellitus, Phenylketonuria, Epilepsy and Obesity. The use of multivitamin supplements containing folic acid before conception and during pregnancy has been shown to reduce the risk for CHD. Alcohol abuse and smoking are known teratogenic for CHD. Environmental hazards like ambient air pollutants, ionizing radiations, water chlorination byproducts, and occupational exposure to organic solvents, chemicals, dyes and paints have been associated with increased risk of CHD. Besides these increased maternal age at conception, psychological stress and Assisted Reproductive Technology are associated with increased risk for CHD. The family history of CHD is a well-established risk factor. The offspring and first-degree relatives of patients with CHD are at a higher risk of having CHD.

In addition to the above-mentioned factors, genetic factors play an important role in CHD. Chromosomal Aberrations like Down Syndrome, Edward Syndrome, Patau Syndrome, Turner Syndrome, Cat Eye Syndrome, Pallister-Killian Syndrome, Chromosome Deletion Syndrome, Williams-Beuren Syndrome, Wolf-Hirschhorn Syndrome, and Alagille Syndrome have been

associated with CHD. Single gene disorders (Noonan Syndrome, Holt-Oram Syndrome, Ellis-van Creveld Syndrome, Kabuki Syndrome) and metabolic disorders (Pompe Disease, Zellweger Syndrome, Smith-Lemli-Opitz Syndrome) are also associated with CHD.

Clinical presentation of CHD patients

The CHD should be suspected if any of the following is present.

1. Difficulty in feeding
2. Respiratory distress
3. Subcostal recession
4. Recurrent LRTI
5. Growth retardation
6. Exercise intolerance
7. Easy fatigability
8. Bluish discoloration of skin
9. Abnormal heart sounds in the older child
10. Sweating during feeding.

Higher the severity of the defect more severe and early onset of the clinical presentation and symptoms. These patients mostly present during the first six months of life.

Management of CHD patients

Clinical assessment and use of different diagnostic tools, aid in the diagnosis of CHDs. Meticulous history and detailed systemic physical examination are the cornerstone of the diagnosis of CHDs. The following tools are used for the diagnosis of CHD.

1. Electrocardiography (ECG)
2. Chest X-ray
3. Echocardiography. The use of fetal echocardiography can detect these disorders prenatally.
4. Cardiac catheterization and angiography, if needed.
5. Computer tomography and cardiac MRI (Magnetic Resonance Imaging) if needed.
6. Pulse oximetry should be used as a screening tool for CHD

Nadas criteria should be used for labeling a child, having heart disease as NYHA (New York Heart Association) criteria is not applicable for children. Once a child is labeled as having CHD they should be referred higher center for further management. These children should undergo regular dental check-ups.

Modes of prevention

Prevention of any disease can be done by multiple strategies. For CHDs following levels of prevention can be utilized:

1. Primary prevention: The aim of this level of prevention is to prevent a disease from even occurring. This can be done by Immunization against Rubella, Tobacco cessation, and intake of Iron and Folic acid during pregnancy.

2. Secondary prevention: This means early detection of diseases in order to prevent the progression of the disease. It often occurs in the form of screening. Fetal echocardiography should be done to screen CHD prenatally.

3. Tertiary prevention: this means limiting the disability of the disease and aiding the recovery from complications. This level of prevention is done through different rehabilitation programs.

Message for prospective mothers

A prospective mother should follow the following points for a safe pregnancy:

1. Discuss any medical condition like Diabetes Mellitus with a qualified medical specialist for preconceptional care
2. Women of childbearing age should take multivitamins containing folic acid daily both before and during pregnancy
3. Discuss the use of any medication with their doctor for possible known teratogenicity.
4. A prospective mother should avoid tobacco and alcohol use
5. Pregnancy should be planned to avoid inadvertent harmful exposures to the fetus in the first trimester.
6. They should avoid contact with people having any febrile illness.
7. They should avoid occupational exposure to organic solvents.
8. They should get immunized against Rubella
9. A screening fetal echocardiogram should be done at 16 to 18 weeks of gestation if there is any doubt.

(The writer is Assistant Professor, Cardiothoracic Surgery, AIIMS Vijaypur Jammu).

Modi's 'Meri Maati Mera Desh' Campaign

OMKAR DATTATRAY

Prime minister Narendra Modi will launch a novel and innovative campaign called Meri Maati Mera Desh in the Amrit kaal and Azadi Ka Amrit Mohatsav in run up to the Independence day 15th August 2023. It will be a big campaign aimed at honoring the freedom fighters and other martyrs who had sacrificed their precious lives for the country. It is a campaign aimed to arouse patriotism, nationalism and love and respect for the country and for the martyrs who have sacrificed everything for the country and even their lives and the nation will remain grateful to these martyrs for generations. The campaign will be launched to honor martyr brave hearts of the country. Modi has said in his monthly Mann Ki Baat radio broadcast that a campaign called Meri Maati Mera Desh will be initiated throughout the country to honor martyrs in the Amrit Mohatsav and as the time has come for celebrating the independence day that is August 15, 2023. During this campaign various programmes will be organized across the country to remember and honor the martyrs who laid their lives for the sake of the nation. Meri Maati Mera Desh campaign should not remain the prime ministers campaign only but should become a mass campaign and movement. This national and peoples campaign will arouse the feelings of patriotism, nationalism and honor for those who had become martyrs for maintaining unity, integrity and upholding the sovereignty of the nation. The general masses of the country should participate in this novel and innovative campaign to honor the brave hearts who had sacrificed everything and even their valued and precious lives for the country. PM Modi deserves to be complemented and praised for announcing that the country is going to launch Meri Maati Mera Desh Campaign to remember and honor the martyrs for having sacrificed their everything at the altar of the country. Such campaigns are needed and are necessary to remember and honor the brave hearts for having sacrificed everything for the country. Modi said an Amrit Kalash Yatra will also be taken out during this campaign. This Amrit Kalash Yatra, carrying the soil of different parts of the country in 7500 Kalash will reach national capital Delhi. This Yatra will also carry plants from various parts of the country. From 7500 Kalash, soil and plants that will come to Delhi, an Amrit Vatika will be built close to national war memorial. A new initiative will be commenced before 15 August 2023 to remember and honor the martyrs and their families called Meri Maati Mera Desh campaign. PM said a special campaign will be launched across the country to remember and honor martyrs. He said these days when the country is reverberating with the Amrit Mohatsav, a big campaign will be started to remember and honor the brave hearts who sacrificed their everything for the cause of the nation. The Amrit Vatika will be built and this will also be the grand symbol of Eak Bharat, Shrahit Bharat. Prime minister Said that he had talked about five resolves - Panch Pran last year in his independence address from the Red Fort for next 25 years of the Amrit Mohatsav and through participation in Meri Maati Mera Desh campaign we will promise to fulfill the Panch Pran. The centre government of Modi is going to start a campaign called Meri Maati Mera Desh throughout the country to honor and remember the martyrs and freedom fighters. Under this campaign various programmes will be organized in cities and villages to honor and remember the freedom fighters and martyrs. To honor and remember lakhs of unsung and unheard freedom fighters and all those who became martyrs for the cause of protecting the unity, integrity and sovereignty of the country, the names of these brave hearts will be inscribed in villages and cities across the country and the aim is to remember and honor the freedom fighters and their family members will also be honored. This campaign will commence on August 9 and conclude on August 30. Whenever Modi gets an opportunity he remembers the freedom fighters and other martyrs and honors and remembers these great national heroes. Today when we are celebrating the Amrit Mohatsav, the Modi government is about to launch Meri Maati Mera Desh campaign to remember and honor the freedom fighters and other martyrs and their names will be inscribed. In rural areas that is villages from August 9 to 15th August, freedom fighters will be honored and those who are not alive, their families will be honored. Under this programme name plates inscribing the name of the

freedom fighters and other martyrs will be written and these name plates will be installed in village Panchayats and other social places as a mark of respect to the freedom fighters and leaders who sacrificed everything for the nation. Besides this in every village 79 plants will be planted for the protection of the environment. In cities programmes will be organized from 16th August to 25 August to remember and honor the freedom fighters and the great personalities who worked for the country and sacrificed everything for the country. PM said that those freedom fighters and other martyrs who had sacrificed everything for the sake of the country will be remembered and honored across the length and breadth of the country from villages to cities and under the campaign called Meri Maati Mera Bharat various programmes will be organized and special inscriptions will be installed in lakhs of panchayats to honor the freedom fighters and martyrs. In brief Meri Maati Mera Desh campaign of the Modi government shows that the prime minister is committed to honor and respect the freedom fighters and martyrs and for the remembering and honoring the known and unsung freedom fighters and martyrs a nationwide campaign will be launched to honor and remember the brave hearts and martyrs who have made valuable sacrifices of even their lives for the cause of the nation. Such campaigns and programmes are the need of the hour as it will help in arousing the feeling of patriotism, nationalism and love for the nation and also for all those martyrs who had sacrificed their everything for the sake of the nation. Modi deserves a pat at his back for having announced that Meri Maati Mera Desh campaign will be launched across the country for remembering and honoring the martyrs, freedom fighters and other brave hearts. The Meri Maati Mera Desh Campaign should become a people's movement and not be limited to government level only. Let us resolve to remember and honor the martyrs, freedom fighters and all those great selfless leaders who sacrificed their everything for the country. Let us ignite the flames of patriotism and nationalism with the novel and innovative campaign called Meri Maati Mera Desh in the whole country.

(The author is a columnist, social and KP activist).

Boosting Bamboo-Natural Green Gold

DR. BANARSI LAL

Bamboo is an important plant gifted by nature in tropical and subtropical areas of the world. It is also called as wonder plant, green gold, emperor of all grasses, wood of the poor etc. It is used by the people in their every-day utilities. It is closely interwoven with the life of the people in several ways. It can be used as a food, fodder, construction material, paper, mats, musical instruments, paintings etc. Bamboo has multiple economical, ecological and social values. Union Territory Jammu and Kashmir lies in the North West of the country. About 19.95% of the total geographical area of J&K is covered under forests. A large part of the geographical area of the UT is under permanent snow cover, glaciers and thus unable to support trees growth. The national level goal in forestry is to cover at least two thirds of the total area in the hilly regions under forests and trees cover. Jammu and Kashmir regions forests account for 47% of the geographical area. Union Territory of Jammu and Kashmir adopted the forest policy to maintain adequate forests in various regions of the UT in 2011.

There is need to popularize bamboo cultivation particularly in the wastelands as bamboo cultivation has immense potential in J&K. Bamboo production is a highly commercial industry and its cultivation

reduces the soil erosion. It can be a source of extra income and employment for the farmers of this hilly UT.

Millions of Indians rely on bamboo for a part of their livelihoods. India is the second richest country in bamboo genetic resources after China. These two countries together have more than half the total bamboo resources in the world. About 136 species of bamboos are reported in India. Bamboo is grown on about 9.57 million hectares in India which constitutes about 12.8% of the total area under forests. Out of the 22 genera available in India, 19 are indigenous and three exotic. The annual production of bamboo in India is about 4.6 million tonnes.

The annual yield of bamboo per hectare varies between 0.2 and 0.4 tonnes depending upon the intensity of stocking and biotic interferences. The economic impact of the agro forestry-based bamboo system may influence general economic development of the country. It is mostly found in N-E States, Chhattisgarh and Andaman and Nicobar Islands and Jammu and Kashmir. Bamboo is one of the fastest growing plants on the earth. Its growth rate ranges between 30cm to 100cm per day. It generates more oxygen than equivalent stand of the trees.

It protects against ultra-violet rays and is an atmospheric and soil purifier. Bamboo grows at a fast rate. A story tells that once

a forest officer kept his hat on a fast growing bamboo culm and forgot to take it with himself.

The next day, he saw that the hat was beyond his hand's reach in 24 hours.

Bamboo has manifold uses from cradle to coffin. Bamboo has many uses as a substitute for fast depleting wood and as an alternative to more expensive materials. It can be used in paper industry, to make small footbridges, water pumps, irrigation pipes etc.

In rural areas it can be used as fodder, in making brooms, food, buckets etc. Nutrient analysis of edible bamboos indicated that it contains 77% to 84% moisture, 4% to 7% protein, 5% carbohydrates, 12-13 mg/100G vitamin C and Na, K, Ca, Mg and P as minerals. Bamboo has the potential for checking soil erosion, fast vegetative growth cover to deformed areas and road embankment stabilization. Bamboo tensile strength is 28000 per square inch versus 23000 for steel. It can be used for making pillars, roofs, ceiling, walls etc. It has been traditionally used to make medicines to treat asthma, cough and fever etc. It is also used to make certain structures in earthquake prone areas, in music and arts.

Planning Commission has set up a National Mission on Bamboo Technology and Trade Development. It has been realized that bamboo is very important in poverty eradication and employment gener-

ation. The major objective of National Mission on Bamboo is to implement an action plan for keeping bamboo as a key component in the national scene to generate employment, to protect environment degradation and give a boost to bamboo industry.

Through various researches in various countries, it has been observed that alcoholic beverages can be made from bamboo leaves, charcoal can be made from bamboo, laminated bamboo mats can be made for disaster prone areas. Therefore, bamboo has important role in strengthening rural economy.

There is need to increase the area and productivity of bamboo. Bamboo plays an important role in rural and socioeconomic development of the farmers. Some farmers grow bamboos in and around their farm-lands to increase their income. The development of artisan skills for handicrafts and wider utility of bamboo provides more employment opportunities and better income distribution for the rural people. There is a dire need to aware the bamboo growers about the latest information on introduction, phenology, reproductive biology, propagation, exchange of germplasm, conservation status etc. There is also a need for the introduction of other species of bamboo of ethno biological significance. It has been observed that most of the bamboo growers do not possess up-to-date informa-

tion on ecological and growth parameters, morphological variability's, conservation value, methods for multiplication etc.

At regional levels systematic survey, range of distribution, flowering periodicity, ethno biological utilization, phenology, floristic compositions, introduction in production forests and homelands of rural areas need to be studied by concerned organizations located in the region. Many of these organizations lack funds, manpower and expertise to assess resources. Inter-institutional support both at regional and inter-regional levels and interaction may help in developing, improving and managing the bamboo cultivation. There is need to develop networking on conservation of bamboo forests, gardens, arboreta, rural homesteads etc. Bamboo growers should get the institutional support at regional, national and international levels. GIS based information system should be developed for the protected areas. Ethno biological approach should be adopted towards the cultivation, preservation of rare and threatened species of bamboo. There should be collaboration between the bamboo growers and scientists. Really bamboo has traversed a long path with a change in perception from it being termed as 'Poor Man's Timber' to being acknowledged as 'Green Gold'.

(The writer is Sr. Scientist & Head of KVK, Reasi, (SKUAST-J)).