

PREVENTION AND MANAGEMENT

Rheumatic fever and heart diseases

DR M SHAHIDULLAH

Rheumatic fever is caused by only 'Group-A' Beta haemolytic *Streptococci* bacteria following infection in the throat. After such infection, there is a chance of rheumatic fever for 2-4 children among 1000. But Anti-streptolysin O titre (ASO titre) can invariably be raised in case of such A, B, C, or G group of infection. Moreover, rheumatism i.e. painful complain elsewhere in the body or of different joints and rheumatic fever are absolutely different diseases. But unfortunately majority of our people thinks of suffering from rheumatic fever when there is pain elsewhere with febrile condition irrespective of age.

Rheumatic fever usually starts after 2-5 weeks of infection with the specific bacteria and pain in a big joint that shift from one joint to another (migrating nature). It may cause fever with erythema marginatum (spot on skin), subcutaneous nodule and/or carditis (inflammation of the valves of heart). It may cause chorea (involuntary movement of limbs and face) caused by central nervous system (CNS) involvement. The children and younger between 5-22 year of age usually

suffer from rheumatic fever.

Consequence of rheumatic fever

Once rheumatic fever occurs, there is certainly greater chance of repeated attack. The small children are worst sufferers with repeated infection. Carditis occurs in 40-50 percent of the patients with initial attack. The main affection or rheumatic fever is the heart valves for why it is so important. Rheumatic heart diseases is a crippling diseases which causes repeated hospitalisation, unable to normal work and died usually within 30-35 years of age or earlier, if proper treatment is not ensured. The more frequent the infection occurs, the more chance of development of rheumatic heart disease.

Rheumatic fever (RF) and rheumatic heart disease (RHD) accounts for 40 percent cardiovascular morbidity and mortality in South East Asia. Still in Bangladesh, 60-70 percent cardiac operations are due to Rheumatic origin (RHD). It is assumed that in Bangladesh about 5,00,000 patients are suffering from RF and RHD of which about 75,000 will need cardiac surgery within 10-15 years.

Low socio-economic, crowding and nutrition

status

Over crowding, deficit nutrition and low socio-economic condition are contributing factors for occurrence of rheumatic fever. In 1920, there were 10 percent prevalent of rheumatic fever in UK North America, Japan and Canada but it declined as low as 0.01 percent at the end of the last century due to improvement of sanitation and use of antibiotics. The specific bacterial infection along with protein calorie malnutrition enhances the occurrences of rheumatic fever.

It has been shown that children with reduced body weight of 10 percent less than normal, suffer significantly with the disease. Public health improvement, socio-economic development, proper nutrition and access to medical facilities could eliminate rheumatic fever.

National Centre for Control of Rheumatic Fever & heart Disease

As primary prevention, streptococcal infection in the throat can be eliminated by an initial injection of Benzathin penicillin of 12 lacs deep intramuscularly or a 10 days course of oral Phenoxy Methyl Penicillin is enough to prevent rheumatic fever. In case of rheumatic fever, secondary

prophylaxis with penicillin treatment either with injection or with oral tablet is the key to prevent of rheumatic heart diseases.

According to WHO, secondary prophylaxis is feasible, practicable and cost effective for the developing countries.

The National Centre launched in 1988 for diagnosis, treatment and follow up of rheumatic cases, training of doctors and paramedics, research, publication and health education with awareness activities. The centre confidently carries out laboratory investigations for rheumatic fever and for other diseases too. Age between 5-30 years usually get outdoor ticket for initial consultation. Rheumatic fever and Rheumatic Heart Diseases patients are being registered hence their particulars enter into computer record, getting injection cards and follow up treatment for the required time period.

Raised ASO titre do not mean rheumatic fever

Normal ASO titre of children of Bangladesh is upto 400 iu., even it can be more. It often increases from area to area and from season to season. It was never a confirmatory diagnostic characteristic for rheumatic fever, where it increase for other reasons mainly with infection due to

all streptococci. It is a great mistake that many lab personnel, quacks and even some of the doctors believe that raised ASO titre confirms rheumatic fever, contributing unnecessary anxiety to the families. Rheumatic fever is diagnosed clinically based upon 'Jones's criteria updated in 1992. The related person should be oriented for proper procedure of diagnosis thus avoiding over diagnosis and under diagnosis of rheumatic fever.

No laboratory tests could diagnose rheumatic fever, but it could support the clinical diagnosis. Only an experience doctor could diagnose a case Rheumatic fever.

Penicillin is the drug of choice for rheumatic fever

Penicillin is still 100 percent effective against streptococcal infection. Main treatment for prophylaxis of rheumatic fever is an injection of penicillin of 12 lacs or oral penicillin for a period of 10 days. Nowadays, a section of people even some of the doctors use to prescribe costly antibiotics or other drug irrespective of need. Once rheumatic fever is diagnosed, penicillin course would be continued upto 5 years or 22 years of age, which is longer. Patients with carditis will contin-

ues secondary prophylaxis with penicillin upto 30 years of age or for 10 years. If one have had rheumatic heart diseases, he or she should be required proper management and other drugs but penicillin would be continued for life long.

Conclusion

Health education, proper nutrition, avoidance of crowding and access of medical facilities can eliminate rheumatic fever. No laboratory tests or ASO titre can confirm the diagnose of rheumatic fever. RF could be diagnosed clinically following Jones's criteria by experience. General awareness has been increased but at the same time unnecessary anxiety, lab tests and expenditure of drugs have been increased. Rheumatic fever and rheumatism are completely separate diseases. The false belief of raised ASO titre and sense of being suffering from RF and RHD should be turned off. A National Institute of Preventive Cardiology and Research for the purposes would be the proper demand of time.

The writer is an Assistant Professor of National Centre for Control of Rheumatic Fever and Heart Diseases, Sher-e-Bangla Nagar, Dhaka.

HEALTH AND SCIENCE BULLETIN

Estimated deaths due to rotavirus in Bangladesh



A rotavirus associated diarrhoeal patient is under treatment.

Rotavirus is the leading cause of severe gastroenteritis among young children. Globally, rotavirus is estimated to cause over 500,000 deaths among children aged under 5 years each year. Two new vaccines against rotavirus have been demonstrated in large studies to be safe and effective in preventing severe rotavirus disease. These studies were conducted among well-nourished patients, but additional evaluation is expected in lower income settings with higher levels of malnutrition, including ongoing studies in Bangladesh. Data on the number of deaths from rotavirus disease will help policy makers evaluate the value of these vaccines for their country.

ICDDR,B estimated the number of childhood deaths from rotavirus in Bangladesh. They used the under 5 mortality rate and proportion of deaths due to diarrhoea from

the Bangladesh Demographic and Health Survey 2004 to derive diarrhoea death figures, and multiplied these figures with the proportion of diarrhoea that was due to rotavirus in two ICDDR,B hospital surveillance systems in Dhaka and Matlab.

ICDDR,B estimate that between 5,756 and 13,430 children died each year in Bangladesh between 2001 and 2004 from severe rotavirus gastroenteritis. An effective, affordable rotavirus vaccine could prevent several thousand childhood deaths and hospitalisations from diarrhoea each year.

This analysis confirms that rotavirus remains an important cause of childhood death in Bangladesh. These data indicate that the introduction of a safe and effective rotavirus vaccine in Bangladesh could prevent several thousand childhood deaths and hospitalisations from diarrhoea each year.

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First Aid



Heat cramps

Heat cramps are painful, involuntary muscle spasms that usually occur during heavy exercise in hot environments.

Inadequate fluid intake often contributes to heat cramps. The spasms may be more intense and more prolonged than typical nighttime leg cramps. Muscles most often affected include those in your calves, arms, abdomen and back, although heat cramps may involve any muscle group involved in the exercise.

- If you suspect heat cramps:
- Rest briefly and cool down.
- Drink clear juice or an electrolyte-containing sports drink.
- Practice gentle, range-of-



motion stretching and gentle massage of the affected muscle group. If your cramps don't go away within one hour, visit your doctor.

What you need to know before blood transfusion

DR MORSHED CHOWDHURY

Epilogue of blood transfusion is that one does not want blood, one need it. Blood is not a factory product; the human body is the only source producing blood. But it must be healthy blood; not a blood poison.

What is blood?

Blood is an essential component of body that sustains life. It carries oxygen and biochemical nutrients to various tissues and organs, removes carbon dioxide and other metabolic waste products. It has liquid component (plasma) and solid components or cells.

Blood groups and compatibility

There are two major types of blood grouping system are the A-B-O and Rhesus or Rh system, depending on the type of antigen present. Red Blood Cells (RBC) have certain surface proteins called antigens. The substance called antibodies in person's plasmas can react with the antigen of the transfused RBC of another person and cause their destruction of blood (chills and

rigor). This may cause anaphylactic shock and death. Accurate matching can prevent such transfusion reaction.

Who can donate blood and who should not?

Any healthy person of 18 to 55 years of age can donate blood.

One should not donate blood in following cases

- Women are advised not to donate during pregnancy and menstruation
- Individual suffered from heart attack or underwent recent major surgery
- Any major or debilitating illness, including cancer, kidney diseases, tuberculosis, syphilis, HIV infection, or had infectious hepatitis in last one year
- Hypertension (high blood pressure), diabetes, anemia or any bleeding disorder
- Anyone who recently suffered from illness like common cold (7 days), measles and chicken pox or medical interventions such as tooth extraction (within 72 hours)

Does blood donation harm your body?

During blood donation, one unit (300 ml), amounting to less than

10 percent, of blood is withdrawn. The body, in no way affecting one's regular activities by blood donation. The loss of blood is rapidly replaced. Ordinarily, an individual can donate blood every three months.

Safety of blood transfusion

A few measures should be taken before blood transfusion. All measures are mandatory.

1. Cross matching between the donor's and the recipient's blood before transfusion

2. Test before receiving blood from donor for malaria, VDRL (for some venereal diseases), hepatitis and HIV/AIDS.

Don't buy blood from professional donors. Because such blood sellers suffer from various infectious diseases and their health standard would not qualify them as eligible donors. Donors from family or friends are the best for this purpose. Donating blood is painless and harmless.

Dr Morshed Chowdhury is a public health expert.

DID YOU KNOW?

What is vision impairment?

STAR HEALTH CORRESPONDENT

Vision impairment means that a person's eyesight cannot be corrected to a "normal" level. Vision impairment may be caused by a loss of visual acuity, where the eye does not see objects as clearly as usual, or by a loss of visual field, where the eye cannot see as wide an area as usual without moving the eyes or turning the head.

There are different ways of describing how severe a person's vision loss is. The World Health Organisation defines "low vision" as visual acuity between 20/70 and 20/400, with the best possible correction, or a visual field of 20 degrees or less. "Blindness" is defined as a visual acuity worse than 20/400, with the best possible correction, or a visual field of 10 degrees or less. Someone with a visual acuity of 20/70 can see at 20 feet what someone with normal sight can see at 70 feet. Someone with a visual acuity of 20/400 can see at 20 feet what someone with normal sight can see at 400 feet. A normal visual field is about 160-170 degrees horizontally.



Visual acuity alone cannot tell how much a person's life will be affected by their vision loss. It is important to also assess how well a person uses the vision they have. Two people may have the same visual acuity, but one may

be able to use his or her vision better to do everyday tasks. Most people who are "blind" have at least some usable vision that can help them move around in their environment and do things in their daily lives. A person's functional vision can be evaluated by observing them in different settings to see how they use their vision.

Vision impairment changes how a child understands and functions in the world. Impaired vision can affect a child's cognitive, emotional, neurological, and physical development by possibly limiting the range of experiences and the kinds of information a child is exposed to.

Nearly two-thirds of children with vision impairment also have one or more other developmental disabilities, such as mental retardation, cerebral palsy, hearing loss, or epilepsy. Children with more severe vision impairment are more likely to have additional disabilities than are children with milder vision impairment.

You can learn more about vision impairment below, including answers to the following questions

Your Doctor



Dear Doctor, I have been using glasses since 2004. But I don't want it. What can I do?

Thanks and best regards
No Name
0192459009@banglalink.net
Answer:

Thanks for your question, but you did not mention your particulars like age, sex etc.

There are various reasons for using glasses. The exact reasons for why you are using glass is not clear from your mail. So you should better consult an ophthalmologist regarding your problem.

If you age is below 40, you can use contact lens to avoid glasses. If you are above 40 and your distant vision is ok, then you can use reading glass only for reading

purpose. ...

Dear Doctor, I had a serious road traffic accident in March 1998. Including overall fractures, smashing, and blood loss for about 10 hours; my right eye was injured in a way to bulging of my eye ball. Doctors presumed that my death was certain. So despite my relatives' request they did not handled me carefully. Then my one brother who is a dentist, stitched my bifurcated eyelids in order to push the eye back to normal place.

I had visited many ophthalmologists till now. For your acknowledgment, I had sever internal brain hemorrhage. I did

not feel any difficulty in vision sharpness.

But for about a month, I am feeling blurring of vision - only in the affected eye. I would like to know, whether blurring would be intensified? Is there any possibility of blindness of the eye?

What could be done to prevent any such grieving result? Dr Lailun Nahar
Dhaka 1207
Phone: 9121958 (res)
Answer:

The cause of blurring of your vision may be due to traumatic cataract as you had a history of trauma. The other causes may be glaucoma or detachment of retina.

It is very important to diagnose the actual cause of your problem. So you need to consult an oph-

thalmologist and you need the treatment very quick.

Dear Doctor, I am a patient of ectopia lentis upward and laterally, with Marfan's syndrome, according to the opinion of Prof Dr M Mustafizur Rahman, the former director of MAI Institute of Ophthalmology and Islamia Eye Hospital. Now I am using bifocal lenses with the power of +7.25 and +9.50 respectively for distant and near vision for left eye and +8.0 and +10.25 respectively for right eye.

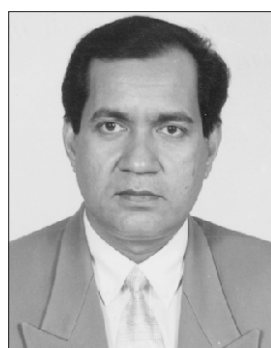
Doctor told me that contact lens is the only alternative of spectacles for me. I would like to know if there is any effective method available for me other

than spectacles or contact lens. Md Shahinur Alam
201/225, Professor Para Choto Bonogram, Sapura Rajshahi 6203
Answer:

Marfan's syndrome is a congenital disease. There may be displacement of the lens due to the loss of attachment with suspensory ligaments.

As you have visual impairment, and you are seeking alternative options besides spectacles and contact lens, you may undergo surgical procedures to implant an artificial lens (implantation of posterior chamber intra ocular lens - IOL).

You should consult an ophthalmologist to explore the desired treatment option.



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Clarification

In a clarification on the news published in the last issue of Star Health headlined "Eminent surgeon urged for multi-disciplinary approach for proper treatment" Prof Dr Khademul Islam said that during his acute sickness as contemporary colleagues and friends, he was seen by many neurologists, neurosurgeons, orthopaedicians

and physical medicine experts. There were little bit difference in opinions of treatments.

Because of his extreme suffering, Prof Islam was convinced with the opinion of Dr Syed Sayeed Ahmed and underwent surgery. Prof Islam also expressed that in fact, he is not truly aggrieved to anybody.