

JUVENILE MITRAL STENOSIS

Pages with reference to book, From 241 To 241

Juvenile mitral stenosis (JMS) defined as pure or predominant mitral stenosis of rheumatic origin under the age of 20 years, has been predominantly prevalent among several Afro-Asian countries, from Morocco to Mongolia, constituting about 11-30% of mitral valve disease. First highlighted by Roy et al (1963), it has remained a pathogenetic puzzle, despite persistent pluri-disciplinary probe over the past almost two decades. Although its paucity among the Caucasians, which even existed in the pre-penicillin period, is well recognised, yet it is perhaps not that uncommon.

Symptomatically, JMS does not differ from mitral stenosis in the adult, except for earlier onset of symptoms and these may be distressing in the fulminating course of the disease, leading to death in some cases. Differentiation from congenital mitral stenosis may be difficult yet important from prophylactic standpoint, and history of rheumatic fever, though present in less than half of the cases, is an important discerner. Atrial fibrillation is present in 3-10% cases of JMS (Roy, 1975). The presence of an opening snap in an asymptomatic child, with or without antecedent history of rheumatic fever, is a sufficient evidence for the diagnosis of mitral stenosis for instituting prophylactic regime.

Surgically (100), JMS forms a substantial segment (10-20%) of mitral commissurotomies in cardiac centres in the developing countries (John, 1975), in a sharp contrast to the Anglo-American series where JMS constitutes about 1% of the mitral valvotomies (Milwidsky et al., 1970). Valvotomy provides satisfactory relief in the majority of the cases. However, mitral valve replacement may be required in a number of cases in the juvenile group (Horst et al., 1973; John, 1975; Arora et al., 1978). Incidence of restenosis in the JMS group is regarded to be higher than when surgery is performed in the adults, but this lacks documentation.

In the current issue of this journal epidemiologic profile and pathogenetic factors have been elaborated (Ilyas and Haidry, 1980). The factors responsible for fulminating course of stenosis of the mitral valve include racial influences, malnutrition and persistent or recurrent rheumatic infection. The relative role of these factors remains unknown. At least one report of negative correlation of lower incidence of Aschoff's bodies in biopsy material in a high risk population has been documented (Ahmed, 1975). Decreasing incidence of JMS and rheumatic heart disease was observed, during a 18 years period from autopsy standpoint, in Japan (Hirosawa and Takao, 1975). This declining trend is related to improved socio-economical conditions, better prophylaxis and treatment.

The challenge of JMS for the clinicians in the developing countries is manifold, including early detection and treatment, rheumatic prophylaxis and surgical correction. Some major questions need to be persued, and no clues are presently available to interrupt the process of juvenile mitral stenosis within the set-up of the developing countries.

References

1. Ahmed, F.S. (1975) Pathology of rheumatic heart disease: Auricular biopsies in mitral stenosis Rawal Med. J., 5:14.
2. Arora, R., Khalilullah, M. Gupta, M.P. et al. Mitral restenosis: Incidence and Epidemiology. Indian Heart J., 30:265,1978.
3. Hirosawa, K. and Takao, A. (1975) Proceedings: Decreasing incidence of JMS in Japan and postoperative history. Jpn. Circ. J., 39:200.
4. Horst, R.L., Reux, B.T., Rogers, N.M.A. et al. (1973) Mitral valve replacement in children Am. Heart J., 85:624.
5. Ilyas, M., Haidry, J.G. Juvenile mitral stenosis: (1980) A genetic Puzzle: J.P.M.A., 30:254.

6. John, S. (1975) Proceedings: Results of mitral valve replacement in young patients with rheumatic heart disease Jpn. Circ. J., 39:199.
7. Mildwisky, H. Stern, S. Shapira, T. et al. Mitral valve surgery in children Cardiology: Current Concepts and Progress. New York, Acade in Press, pp. 1973-195, 1970.
8. Roy, S.B., Bhatia, M.L., Lazaro, E.J. and Ramalingaswami, V. (1963) Juvenile mitral stenosis in India. Lencet, 2:1193.
9. Roy, S.B. (1975) Proceedings: Challenge of juvenile mitral stenosis in India Jpn. Circ. J., 39:198.