

# DR. NEMISH A. SHAH



## OVER 30 YEARS OF COMMITMENT TO CARDIAC SURGERY

**ACTA:** *You have made significant contributions to the treatment of valvular heart disease in India over the past 30 years and have performed an enormous amount of valvular surgery on patients to correct problems associated with the disease. Considering all factors, please tell us your views on deciding which type of valve to select for a patient and whether valve repair is increasing in India as in other parts of Asia.*

Choice of prosthesis in valvular surgery should be viewed from many angles, and it is imperative that there be a fairly comprehensive follow-up on these patients to assess performance. I do not have any long-term review because of the problem of patients not returning for evaluation; a patient we have not seen for a few years is either alive, dead, or has been reoperated at another institute. Therefore, I can only give you my impressions.

▶ Aortic valves are less of a problem, and a commissurotomy is possible in about 5% of cases. Repair of a major leaking aortic valve is extremely difficult in rheumatic heart disease except in cases of aortic insufficiency with ventricular septal defect. All prostheses seem to do well in the aortic position.

▶ Mitral valves are the major challenge. When I started doing open-heart surgery in 1963, I attempted repair, but the intermediate and short-term follow-up in these cases was poor. There was recurrence of mitral insufficiency in the vast majority of cases, and we lost all cases with recurring symptoms. A second open heart procedure was not contemplated at that point in the development of cardiac surgery.

▶ I was influenced early on by the work of Donald Ross on homografts; and a visit with Sir Brian Barratt-Boyes in New Zealand encouraged me to begin doing replacements with homografts in 1973. It was possible to obtain cadaveric valves at that time, but antibiotic sterilization was a problem. We had high in-hospital mortality and within 6 months lost patients from bacterial and fungal endocarditis. However, it is interesting that those few who survived had a good 15-18 years of drug-free existence; and, in the last 5 years, I have had an opportunity to remove some of these early homograft valves.

Surgeons have had a long history of love and hate with mitral valve repair. The first phase of annular stitches proved to be unsatisfactory. The second phase was of posterior advancement or a reverse DeVega stitch. The results were not predictable; although, to be honest, I was not doing enough correction—namely repair of chordae and not using an annular ring to control further dilation. Hence my results were not satisfactory. Repair is once again in fashion in India; but the question must be asked—will the results be acceptable after 10 years? Any operation on the mitral valve must give a 70-80% long-term survival or freedom from reoperation rate.

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**“VALVE SURGERY WILL ALWAYS BE A GREAT CHALLENGE TO SURGEONS IN INDIA AND ASIA.”**

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**ACTA:** *You have had a lot of experience with bioprosthetic valves, but the trend in India the last few years seems to be toward the use of mechanical valves. Do you see tissue valves making a comeback over the next 5 years; and if so, what direction will this resurgence of interest take?*

I have always been a great believer in the bioprosthesis because of the excellent quality of life for the patient, who is basically free from constant medication. When excellent results were reported from the USA with the glutaraldehyde-preserved valves, I used them routinely, especially the bovine pericardial valves. These turned out to be a disappointment to me despite the excellent hemodynamics they provided. In any group of patients almost all the valves failed in 3-5 years. The porcine valves were better, but once again the failure rate was unacceptably high after 7 years. This is not news to today's younger surgeons. However, between 1976 and 1982, there were no reported failures of porcine prostheses; then suddenly surgeons all over the world became disillusioned with these valves and either reduced their use or stopped using them altogether.

If bioprostheses are to stage a comeback, there must be a better method of sterilization and storage. I firmly believe the less damage done to valve tissue with chemicals, the longer it will survive. The problem is that the confirming results of any methods will not be available until 10 years after clinical use. According to the literature, the great enthusiasm of pretreatment of porcine valves with various methods to prevent calcification is no longer supported by long-term improvement in survival of these valves.

**ACTA:** *With the Indian population approaching 900 million by the end of this century, what do you see as the best way for the country to address increasing demand for valvular and open-heart surgery? How will the trend toward treatment in private centers affect those in the public sector who cannot afford the cost of routine cardiac surgery?*

Valve surgery will always be a great challenge to surgeons in India and Asia. The intermediate mortality has been acceptable, but the long-term results are not really known in this part of the world. Proper studies should be conducted and reported in journals such as ACTA. While valvular disease is still increasing in the East, it has essentially disappeared in the Western world. We have an active rheumatic disease problem in developing countries, which certainly dictates the outcome of any procedure carried out on the valve.

Doing cardiac surgery has given me a great pleasure and sense of fulfillment over the years. When I started doing open-heart surgery at a private hospital in Bombay, everyone was skeptical. Today we have as many centers in private institutes as in government hospitals. Cost is a major factor limiting cardiac surgical work in India; and no government can afford to give full and free treatment to all patients. The private hospitals must do subsidized work, and cardiac surgeons must devote a part of their time to treat, free of professional fees, patients in lower economic groups if this massive problem is to be adequately addressed.

*The preceding interview, conducted recently by the Asian Cardiovascular & Thoracic Annals with Dr. Nemish A. Shah of India, is the second in a series with notable regional contributors to cardiac medicine.*

*Dr. Nemish A. Shah's involvement in cardiac surgery in India has spanned more than 30 years. One of the country's most active and highly respected cardiac surgeons, Dr. Shah was born on January 31, 1924. He received his medical education in India at Seth G.S. Medical College and KEM Hospital in Bombay; and in 1955, after 2 years of training in Leicester, United Kingdom, he returned to India. In 1963, he started a program of open-heart surgery at Bombay Hospital.*

*Since starting a program of private cardiac surgery—a difficult task, considering it was one of India's first—Dr. Shah has developed a keen interest in valvular and congenital heart surgery over the years. He is a past-president of the Association of Thoracic & Cardiovascular Surgeons of India and a member of the Royal Society of Medicine in the United Kingdom and the Association of Thoracic and Cardiovascular Surgeons of Asia.*

*Still active in cardiac surgery, Dr. Shah resides with his wife Rukmini in Bombay. They have one son and a very recent addition to the family, a granddaughter.*

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