

# Docs give artificial eye touch of realism

Mumbai surgeon dusts up a little-known technique from old texts, colleagues design acrylic prosthesis

## EYE FOR AN EYE



The silicon implant looks like the real thing

■ The technique (myoconjunctival enucleation) involves suturing eyeball muscles to the peripheral parts of the conjunctiva. It replaces the old method in which the muscles were sutured to each other

■ Six weeks later, the ocularist steps in. He custom-makes a prosthesis that matches the other eye colour, down to the blood vessels. The technology is imported from the US, but it is manufactured at a fraction of American costs in India. So, a customised prosthesis made in the US would cost \$ 4000 as against \$ 200 (Rs 9,000) in India

Malathy Iyer | TNN

Mumbai: One look at 24-year-old Ramesh More and no one can say that his right eye is a mere showpiece. "At times, I feel, it looks better than my normal left eye," gushes the youngster who lost his right eye 18 years back while playing with friends.

What More (not his real name) likes the most about his new acrylic eye — customised from a silicon prosthesis costing Rs 100 — is its near-real movements. "I can now even sleep with my eyes shut, something I couldn't do with my older plastic eye."

False eyes have been in use for a long time. Beady-eyed pirates are a regular feature of story books; cricketer Tiger Pataudi emerged as a real-life hero who wasn't fazed by his glassy eye. But a team of Indian doctors have now added a touch of realism to the artificial eye — and won an award from the American Academy of Ophthalmology a couple of months back for their innovation.

It was over a year back that Mumbai doctor Debraj Shome,

an ophthalmic-facial plastic surgeon, picked up a little-known technique from old surgery books and started fixing eyeball muscles in a manner that facilitated better movement for the artificial eye (see box).

"Patients can now get up to 80% movement which was not possible with the earlier techniques," says Dr Shome, who is attached to the Aditya Jyot Eye Hospital, Wadala, and the Tata Memorial Hospital, Par-el.

Hitherto, patients wanting a better moving false eye had to opt for a porous polyethylene implant costing over Rs 16,000. In comparison, the surgical innovation devised by Dr Shome along with Dr Santosh Honavar and Dr Kuldeep Raizada (a team from the prestigious L V Prasad Institute based in Hyderabad) works out to Rs 30-35,000, inclusive of the surgery and eye-manufacturing costs.

On Friday, the same team of doctors will meet patients at the Aditya Jyot Eye Hospital and check out some patients who have already got the prosthesis fitted and others

who want to have it implanted.

Ten-year-old Rashmi Ingle, who was a promising swimmer until cancer struck three years back, will be one among those queuing up.

"Her right retina was affected and it was thought safest to remove the eye," recalls her father Vijay, an employee of the Atomic Energy Regulatory Board.

But in September, Rashmi got a matching brown eye — rather a prosthesis that is encouraging her to give up the dark blue shades she has used as a shield so far.

The procedure has two stages. In the first stage, the plastic surgeon either removes or treats the damaged eye before inserting a silicone implant. In other words, Dr Shome prepares the perfect grove — even taking skin from Rashmi's hip to provide symmetry to her face that had been affected by cancer treatment — for the prosthesis.

The ocularist, whose task is to design an artificial eye, steps in during the second stage of the process to shape an acrylic prosthesis. Ocularist Dr Raizada, who comes to Mumbai once a month, has designed 7,000 such eyes. He says the new prosthesis scores because of its "customised approach".

Dr Raizada studies the existing eye, down to the minute details of its size, glow as well as the thin, red blood vessels alongside. The irritation factor after the surgery is thus so low that patients need to remove the false eye only once a month as against once a day, which is the usual practice with the older method.

But the operation is still considered a success only when the movement of the implant can be transmitted to the prosthesis.

However, with patients testifying to its benefits, the low-cost solution may prove to be a gift from Indian doctors for Indians, and perhaps the world.