

Week - Health

neurosurgery

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THROUGH THE NOSE

Pathbreaking technology

Surgeons can now remove brain tumours through the nose

By Gunjan Sharma

Uma Kare, 60, had a tumour the size of a cricket ball at the anterior skull base. It was compressed and caused a swelling in her brain. According to her doctor, if it were to be removed through the conventional brain surgery with the help of retractors, it would have damaged a large part of the brain, which could have affected her vision, hearing, and smell. So her doctor reached her brain via her nose with the help of an endoscope. As the tumour was at the base of the skull, he removed it without even touching the brain. It saved Uma not only from an open brain surgery, but also from the trauma of losing hair and living with a long scar. The new method ruled out the possibility of a number of complications that are common in conventional brain surgery. "When she came to me she was scared of open brain surgery and the tumour had caused severe swelling in her brain. If you touch a swollen brain, chances of complications are high. She was in the hospital for four days and took a month to recover," says Dr Sudhir Dubey, consultant neurosurgeon,

Max Balaji Hospital, Delhi.

Endoscopic endonasal surgery for tumours and lesions near the skull base is the latest advancement in neurosurgery. Doctors enter the brain through the nasal opening using an endoscope and navigator. The endoscope drills through the bone and makes a corridor to the tumour. The tumour is then cut into small pieces and sucked up using a suction pump. Bone fragments can also be taken out with the help of the pump. The surgery leaves no scars. The hole drilled in the bone is sealed with collagen and fibrin glue. The only possible complication in the surgery is cerebral fluid leakage, which is now taken care of by plastic vascularised flaps.

In a conventional surgery, the brain is opened up from the front and then metallic retractors are used. This causes injuries to the softer brain tissues resulting in brain malfunction. It increases the chances of seizures and may also cause psychological disturbances.

The other option is transoral odontoid removal surgery, in which a big opening is made in the roof of the mouth, which requires stitches through the nose. It has the same benefits as endoscopic



Doctors enter the brain through the nasal opening using an endoscope and navigator to reach the tumour.

endonasal surgery. "Brain surgery is always done through corridors. There is a scope via nose for making corridors till the base of the skull, pituitary gland and also till the junction of brain stem and cervical bone," says Dubey.

Shobha Acharya had weak limbs as her second cervical bone was pressing the brain stem. So every time she moved her head, the bone pressed the brain stem, causing severe pain and swelling. She was scared of mouth surgery, so she was operated upon through the nose. She was discharged after three days and started walking three weeks after the surgery. "When I was told that I had to be operated through the mouth, I was shocked. But the surgery through the nose was comfortable and it did not leave any scars," says Shobha. ☉