LOCAL • FAST

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FORECAST: TEMPERATURE: COLABA MAX 34 | MIN 18 | SANTA CRUZ: MAX 30 MIN 17 | SUNNY SUNRISE 0706 HRS | SUNSET 1805 HRS | SENSEX 19244 | SILVER 61940

JAWS, the trailer

Mirror drops in at the OT to bring you a sneak peek of a unique cell therapy to regrow a 61-year-old's upper jaw in a laboratory

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All the world's a stage, is what the Kannakatti family of Hyderabad's Mallapur neighbourhood realised on a morning five years ago when they were treated to an impromptu tragicomedy right in their kitchen. K Pushpa Lata was discussing the lunch menu animatedly with her daughter-in-law. Before she could finish rattling off the recipe, her dentures slipped out of her mouth, and missed the oil bubbling in a frying pan by a whisker. Her five-year-old granddaughter, who was standing nearby, cracked up. "I thought it was just an accident," says Pushpa Lata.

The 61-year-old was fitted with dentures at the early age of 40 after poor dental hygiene and cavities had attacked most of her upper teeth. What Lata didn't know was that the continued use of dentures over 15 years would lead to the deterioration of her maxilla or upper jaw bone, leaving it incapable of holding the dentures in place.

The teeth sit in place in the human jaw through a root structure. The bone tissue lining the jaw stays in shape when it's exercised through biting and chewing. These actions stimulate the root, strengthening the bone. When an adult suffers teeth loss, bone stimulation ceases in that specific area. Thus, the portion of the jaw bone that anchors the teeth starts to resorb (break down).

Bone resorption starts within the first year of teeth loss, and continues throughout one's life. The rate of resorption varies from person to person, depending on their diet. In women, the rate of resorption has been seen to be faster than in men, especially after menopause.

HOW DENTURES AGGRAVATE BONE LOSS

For Lata, wearing dentures heightened bone resorption.

Dr Dilip Deshpande, consulting prosthodontist and implantologist at Lilavati Hospital explains how dentures can reduce your chewing efficiency by to 25 per cent. "Teeth have facial nerve endings connected at the roots. These inform the brain about the density of the food you are eating. The nerves send a signal to the brain about the level of pressure it needs to apply to chew that particular food." Those fitted with dentures are unable to differentiate between the solidity of food substances. They bite all foods with the same pressure, and stop only when the denture starts hurting the jaw bone, thus further deteriorating it.

For Lata, life was no longer the same. Her food intake and conversation skills were affected. She gave up eating apples, carrots and onions — her favourites. Eating rice was just as challenging. Overcooking rice, and mashing vegetables was the only way out. Her age-old post-lunch habit of chewing on a cardamom was possible only with the help of the central incisors that are traditionally meant for cutting food, not chewing. Wrapping up a meal took her anywhere from 35 to 45 minutes.

Fearing embarrassment, Lata remembers turning into a recluse at family outings and religious ceremonies. "Who'd think dentures were the cause of her awkwardness," says her brother Udaya Bhaskar Rao.

REGENERATIVE CELL THERAPY

What if Lata could be fitted with a brand new jaw bone created from her own bone cells? She made the trip to Mumbai to participate in cell regenerative therapy, a procedure that's still in the experimental stages.

The Regenerative Medical Services (RMS) lab in Andheri (E) was where doctors extracted 10 to

> With teeth gone missing, those fitted with dentures bite all foods with the same pressure, thus further deteriorating it (jaw bone)

DR DILIP DESHPANDE, prosthodontist and implantologist

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ALL BRAND NEW

After suffering upper jaw bone deterioration due to prolonged use of dentures, and taking hours to chew a simple meal, Pushpa Lata has opted to grow a new jaw bone from her own bone cells in a new pathbreaking procedure at Lilavati Hospital.

SACHIN HARALKAR