

Still rare in India, artificial skin grafted on burns victim

Only partial success, admits city cosmetic surgeon; but 20 pc of synthetic tissue still attached to patient who sustained 85 pc burns

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A MONTH ago, this 23-year-old Pune boy was fighting for his life after sustaining over 85 per cent burns. On Friday, he was talking about how a revolutionary technology, still only picking up in India, is giving him fresh hope. For, over the past three weeks, he has had massive reconstructive surgery — with partial success — using a synthetic substitute of human skin called INTEGRA.

“It took us three major operations to remove dead skin from his body. Once the skin was excised, artificial skin was attached on his chest. We attached pig skin on his arms and forearms. But pig skin helps only as a temporary layer to heal the wounds below,” said Dr S M Keswani, the cosmetic surgeon treating the youngster, a medical student and now one of the very few burns patients in the country to have had surgery with INTEGRA.

INTEGRA is not officially introduced in India, but on the insistence of the patient’s mother and the treating doctors, the company donated the synthetic skin.

In this case, the operation was only partially successful as he de-

WHAT IS GRAFTING?

■ HUMAN skin has two layers — epidermal and dermal. In third degree burns (burns more than 50 per cent) the dermal layer that generates new skin is damaged too. The typical skin graft is a bloody, painful process that involves harvesting slabs of skin containing healthy dermal layer from elsewhere on the body and stapling them in place over the cleaned wound. In artificial skin grafting, once the skin is attached to the patient the dermal layer begins to regenerate. Surgeons then remove a silicon layer of the artificial skin and replace it with cultured epidermal cells (grown in a lab) from the patient. Since artificial skin provides a dermal layer, surgeons can use thinner grafts, less painful for patients.

veloped an infection. “The chances of infection are 25 per cent, as the synthetic skin may get infected from the bacteria already present on the patient’s wound. In Vishal’s case we had to remove 80 per cent of the artificial skin as he developed infections, but 20 per cent is still attached to the chest where it was grafted,” said Dr Keswani.

The victim, who wishes to remain anonymous, was burnt on March 9 in the basement of his apartment while transferring

petrol from one tank to another. He suffered burns on his arms, chest, face and back, lower extremities.

“Not even once did we have a negative thought about him not surviving. Instead of being dejected, we were in constant touch with the doctor treating him and then discussed the situation with surgeons in America. That’s when we learnt about the artificial skin,” recalls his mother.

A week after the accident, well aware of the shortage of skin and skin donors in Mumbai, the victim’s parents looked out for options. “Our family friend and a practising plastic surgeon in the United States helped us get artificial skin through a donation. The company donated the skin patches used as free samples, which were then transported to India. It took several days for the skin to come, as it had to be cleared by Customs,” she says.

Dr Keswani admitted that artificial skin cannot be promoted as a regular line of treatment for all patients, given its prohibitive cost. “Had it not been a donation, the family would have had to spend Rs 40 lakh for a 4 inches by 4 inches patch,” he added.

The victim is now recuperating at Shushrut Hospital in Chembur.