

City doctors perform Maha's first small bowel transplant

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Time: The state's first small bowel transplant took place at a city-based hospital on Friday.

A brain-dead Mumbai woman's six-foot-long small intestine was transplanted into a 27-year-old engineering student suffering from short gut syndrome at Jupiter hospital. The first small bowel transplant was performed at a hospital in the US in 1967. The feat was performed in India at Medanta hospital in Delhi in 2013.

The transplant helps the patient to gain ability to digest food and come off parenteral nutrition. The small intestine, despite its name, is the longest part of the gastrointestinal (GI) tract.

"We have successfully crossed the first step of transplanting the small bowel. Looking at the colour and movement of the transplanted bowel inside the man's body post-surgery, the transplant is a success. This is the 9th small bowel transplant in the country," the hospital's chief multi-organ transplant surgeon, Gaurav Chaubal, said.

"Right now, he is on parenteral nutrition. We will bring that down by giving him pre-digested food after a week from now. Then we will shift him to normal diet. This transition takes two to three weeks," Chaubal said.

Three months ago, the man, a Thane resident, had complained of acute abdominal pain and was diagnosed with intestinal gangrene. "Doctors had to cut off his entire small bowel. Since then he is surviving on nutritional given to him through a tube intravenously," Chaubal said. Investigations revealed that the man had been

THE CHALLENGES

- > The main task was to find the right donor
- > Bowel donors have to be selected carefully
- > Usually, they need to be young individuals who are stable after brain death

- > The donor and recipient should be blood group and HLA compatible

- > The donor should be young & haemodynamically (blood circulation-wise) stable

- > Long term survival post-transplant is 75% to 80%

POST-TRANSPLANT CARE

- > Usual challenges in the postoperative period is to manage the immunosuppression effectively
- > Second challenge is to wean the patient from parenteral nutrition to enteral nutrition

WHO NEEDS SMALL INTESTINE TRANSPLANT?

Patients who develop short gut syndrome due to necrotising colitis (in which portion of the bowel dies), midgut volvulus (twisted gut) and mesenteric ischemia (sudden loss of blood flow in the gut) and are dependent on an intravenous administration of nutrition



(Source: Organ Transplant Programme, Jupiter hospital, Pune)

suffering from a developmental anomaly called intestinal malrotation or midgut volvulus.

"Ever since the resection of small bowel, he was on parenteral nutrition. As he could not eat, he lost 30kg of body weight in three months and was malnourished. His liver functions were also beginning to get deranged which is a known complication of prolonged administration of parenteral nutrition. He urgently needed a bowel transplant," Chaubal said.

Relatives of a 46-year-old woman, a resident of Mumbai, who was declared brain-dead at Fortis hospital in Mulund, consented to donate her vital

organ late on Thursday evening. The man had registered with the Jupiter hospital for transplant last month.

The other members of the doctors' team who carried out the transplant are surgeons Suryabhan Bhale-
rao, Aditya Nanawati, Apoorva Deshpande, Hunaid Hatimi, Abhijit Naik, gastroenterologist Pavan Hanchanale, nephrologist Shailesh Kakde, anaesthesiologist Amit Bhargava and Bhagyashree Arbhi. "In the past, six small bowel transplants took place at hospitals in Chennai and two in Delhi," said transplant coordinator Aarti Gokhale of Zonal Transplant Coordination Committee.



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City hospital performs state's first small bowel transplant

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DR GAURAV CHAUBAL, chief multi-organ transplant surgeon, Jupiter hospital

PUNE: Maharashtra's first-ever small bowel transplant was performed on a 27-year-old male in the city on Friday, the Zonal Transplant Coordination Committee (ZTCC) Pune zone said.

"The organ was transported from ZTCC Mumbai in the middle of the night and the transplant surgery on the patient from Thane was performed at around 3am at Pune's Jupiter hospital in Baner," said Aarati Gokhale, ZTCC Pune central coordinator.

"We received the organs from ZTCC Mumbai through ROTTO (Regional Organ and Tissue Transplant Organisation), Mumbai. The donor was from Fortis Hospital, Mulund and organs were allocated to us because we had two patients registered for small bowel transplants in our zone," Gokhale said.

According to Gokhale, it is the first-ever small bowel transplant in the state, after two such transplants in Chennai and Delhi. The transplant was successfully done with close coordination by traffic police teams from Mumbai, ZTCC Mumbai, Raigad highway, Pune rural and city police who created a green corridor last night. The distance of 138 km to transport the organ to be transplanted was covered in two hours because of the green corridor.

The recipient, a 27-year-old male, was suffering from short gut syndrome, a rare malabsorption disorder caused by a lack of functional small intestine. When the small intestines fail, transplant is the only option. Small bowel (intestine) transplant is the life-saving surgery performed on patients with irreversible intestinal failure. It is a complex surgery and requires expertise to perform, Gokhale said.

Once the intestine was allocated to the recipient, a team of surgeons from Jupiter hospital retrieved the small intestine from the donor and the recipient surgery started. Before the transplant, the patient was surviving on parenteral nutrition for three

months. The length of the small intestine which was transplanted is 6 feet.

Explaining the transplant process, Dr Gaurav Chaubal, chief multi-organ transplant surgeon at Jupiter hospital, said, "Small bowel or intestinal failure means that the bowel is unable to absorb from food, the nutrients, fluids and electrolytes that are essential to live. Due to short bowel syndrome the patient was provided nutrients by TPN (Total Parenteral Nutrition) that is nutrients were supplied directly into a vein (intravenous) in the form of liquid. Through the transplant, we replaced six feet of the diseased or shortened small bowel with a healthy donor's bowel."

Dr Chaubal said that it would take about 2-3 weeks for the transplanted small bowel to function. The small bowel transplant is similar to any organ transplant, however the criteria for the donor are more strict as compared to other organs. "The donor has to be younger and also not obese which is what makes it a rare condition. After transplant too we have to be sure that there is no infection or rejection from the body towards the organ."

The donor was a 48-year-old female who suffered brain death due to intracranial bleeding.

The team that carried out the operation included Dr Aditya Nanawati, Dr S Bhalerao, Dr Apoorva Deshpande, Dr Hunaid Hatimi, Dr Abhijit Naik, Dr Pavan Hanchanale, Dr Shailesh Kakde, Dr Amit Bhargava, Dr Bhagyashree, Dr Vaishali Solao and Dr Javant Shelgaonkar.

पुण्यात राज्यातील पहिले लहान आतड्याचे प्रत्यारोपण

डॉक्टरांच्या प्रयत्नामुळे विद्यार्थ्याला जीवदान

पुणे, ता. ६ : लहान आतड्याचे राज्यातील पहिले प्रत्यारोपण शुक्रवारी पुण्यात झाले. मेंदूचे कार्य थांबलेल्या मुंबईतील महिलेने दान केलेले सहा फूट लांबीचे लहान आतड्याचे प्रत्यारोपण २७ वर्षीय अभियांत्रिकी विद्यार्थ्यावर करण्यात डॉक्टरांना यश आले. लहान आतड्याच्या आजार झालेल्या या विद्यार्थ्याला जीवदान मिळाले. प्युपिटर रुग्णालयात ही शस्त्रक्रिया केली.

जगातील पहिले लहान आतड्याचे प्रत्यारोपण अमेरिकेत

१९६७ मध्ये झाले. या अवयवाचे देशात पहिले प्रत्यारोपण नवी दिल्लीतील मेदांत रुग्णालयात यशस्वी झाले. प्रत्यारोपण शल्यचिकित्सक डॉ. गौरव चौबड म्हणाले, "लहान आतड्याच्या प्रत्यारोपणाचा पहिला टप्पा यशस्वी झाला. प्रत्यारोपित लहान आतड्याचा रंग आणि हालचालींच्या आधारावर हे प्रत्यारोपण यशस्वी झाल्याचे दिसते."

"प्रत्यारोपणानंतर रुग्ण पूर्ववत होण्यासाठी किमान तीन ते चार आठवडे लागतात. रुग्ण पूर्ववत होताना प्रत्यारोपित अवयव आपल्या



शरीराने न स्वीकारणे, हा सर्वात मोठा धोका असतो. सध्या रुग्णाला बाहेरून पौष्टिक घटक दिले जात आहेत. एक आठवड्यानंतर पूर्व पचन आहार दिला जाईल. त्यानंतर बाहेरील पौष्टिक आहार कमी करण्यात येईल. त्यानंतर टप्पाटप्प्याने आहार पूर्ववत सुरू करण्यात येईल. त्यासाठी दोन ते तीन आठवड्यांचा कालावधी लागेल,"

देशातील नववी शस्त्रक्रिया

पुण्याच्या 'शोनल ट्रान्सप्लंट को-ऑर्डिनेशन कमिटी'च्या (झेडटीसीसी) समन्वयक आरती गोखले म्हणाल्या, "लहान आतड्याची गरज असलेले राज्यात इतर कुठेही रुग्ण नव्हते. पुण्यात मात्र, दोन रुग्णांची नोंदणी झाली होती. त्यापैकी एक रुग्णावर प्रत्यारोपण करणे शक्य नसल्याचे डॉक्टरांनी सांगितले. त्यामुळे दुसऱ्या रुग्णावर दान केलेले लहान आतडे प्रत्यारोपित करण्यास मान्यता देण्यात आली. त्यामुळे गुरुवारी रात्री दान केलेले लहान आतडे पुण्यात घेऊन येण्यासाठी पोलिसांच्या मदतीने 'ग्रीन कॉरिडोर' करण्यात आला. हे राज्यातील पहिले आणि देशातील नववे लहान आतड्याचे प्रत्यारोपण ठरले. यापूर्वी चेन्नई येथे सहा आणि दिल्लीत दोन या अवयवाचे प्रत्यारोपण झाले आहे."

असेही त्यांनी स्पष्ट केले.

तीन महिन्यांपूर्वी ठाणे येथील रुग्ण पोटात तीव्र वेदना होत असल्याची

तक्रार घेऊन आला. त्याच्या

पोटाच्या आतड्याला गंगरॉन झाल्याचे निदान झाले होते.

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