Lend me a hand

Ever since the first hand transplant in India in 2015, patients from across India and abroad have been lining up at a Kochi hospital, even as more hospitals have registered for the procedure. But only two more transplants have been possible since.

With a pakol (an Afghan cap) on his head and dressed in a deep green Pathani suit, paired with a neatly stitched half jacket, Sulemani Sulaiman slowly makes his way to his
lodge, off a narrow lane in Ernakulam, the eastern mainland of Kochi. In his tiny room, Afghani kurtas hang on one wall, there is a broom in a corner, an electric food processor sits under the bed, while books on Islam occupy a side shelf.

Sulaiman leaves his prosthesis on the bed. It is uncomfortable. As he settles down, the tall and athletic 25-year-old begins reading the Quran, flustered when he can’t turn a page. “When I have hands again, I will earn and send my children to school,” says Sulaiman, in slow Pashto, staring at no one in particular. “That is his only wish. He sold his land and shop for this,” says his friend Ameer Muhammed, a madrasa teacher, who is here with him. A scrap dealer, Sulaiman’s last memory is that of a bomb blast near his shop in a village in Afghanistan’s Zabul province, neighbouring the restive Kandahar, in 2016. He woke up in a Kandahar hospital with both his hands amputated, right eye damaged and metal shards piercing his body. “I felt my life was over,” he says as Muhammed, who knows passable Hindi, translates.

Then, his brother in Iran told Sulaiman about India’s success at hand transplants. Nine months ago, Sulaiman sold his land and his scrap store for around Rs 25 lakh, and in March this year, he took a flight to Kochi — in search of hands. The transplant for both hands costs Rs 20 lakh. “We didn’t believe getting a dead person’s hand was possible. His wife persuaded him,” Muhammed says. “Bachcho ka taalim ke liye (For our children’s education),” mutters Sulaiman, a father of three.

In the three months that they have been here though, there has been no sign of a hand, with doctors unsure of when a donor would be available. However, the two can’t return home as they wait; should a hand come their way, the transplant would have to be conducted within five hours of it being detached from a donor’s body. A few lanes away, Mohammed Bahauddin, 21, who lives with brother Tofail Najmuddin in a guest house, has been waiting longer. The siblings from Bangladesh have been in Kochi for 14 months. Bahauddin doesn’t want to return home to Chittagong without hands, where he would be confined to a life indoors. He hides his stumps under long sleeves, and keeps his hands crossed over his chest all the time.

On a cold February morning in 2015, his motor-bike had collided with a truck, and his hands had got crushed under. Twenty-one days later, they were amputated. He hardly leaves home since, he says, even trading his mobile phone for an iPad with a bigger screen. It was a YouTube video on hand transplants that brought him to Kochi. “I approached four hospitals before this. This is my only hope. My antibodies are high. Doctors have said the count needs to come down for the transplant to be successful. I have undergone three plasma filtration procedures already,” Bahauddin says. He had once hoped to become a software engineer, and was trying to clear Class
12 exams when the accident took place. Now, after the hand transplant, he aims to join the family business in fisheries.

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Ever since it successfully conducted the country’s first hand transplant in January 2015, some 198 physically challenged people from India, Malaysia, Afghanistan, Bangladesh, Australia and Iraq have visited the Amrita Institute of Medical Sciences and Research Center (AIMS), seeking details of the procedure. Every day, the hospital’s re-constructive surgery department receives at least five e-mails with similar queries, including from Pakistan. The hospital’s registry tells this story of hope and desperation: Ameer Abbas (19) from Iraq visited in July 2016. A soldier, he lost an arm in the fight against the Islamic State. In 2015, there was Lavkhush Kumar Saroj from Uttar Pradesh, who lost his left hand to a firecracker injury. The same year saw Chanddeep Singh from Jammu and Kashmir, who suffered electric burns, which led to his hands being amputated above the elbow.

![The team of doctors who are part of the hand transplant team at the Amrita Institute of Medical Sciences in Kochi (Express Photo by Nirmal Harindran)](image)

AIMS says they first thought about hand transplants in 2013. “We had amputated the hands of a young patient who had suffered electrocution. We thought if a hand transplant was possible, a young life could be restored,” says Dr Subramania Iyer, head of plastic and re-constructive surgery, AIMS. The 15 doctors in the department studied transplant procedures globally. “When the hospital registered itself for the procedure, we found that limbs were not specifically mentioned in the Transplantation of Human Organs and Tissues Act. A government team inspected our hospital in 2014 before the licence was approved,” says microsurgeon Dr Jimmy Mathew.

Eleven hospitals in India now have licences to conduct hand transplants. But in the two years since that first procedure, just two more hand transplants have been carried out, and both at AIMS. For one, not many families are willing to donate a brain dead patient’s limbs. Under the Transplantation of Human Organs and Tissues Act, a hand, or cadaver, donation is medically
possible only from patients who have suffered a brain-stem death, a condition in which there is irreversible damage to brain, stopping its functions, while there is activity in the rest of the body. This condition is common in road accident victims.

Manu, the recipient of the first hand transplant in India, at his wedding. He met Sreeja at the hospital where he was recovering.

Religious beliefs are a major roadblock, says Prasad V G, the hospital’s transplant coordinator: “Kerala is a literate state but hand donation is still considered mutilation of the body here.” Tasked with seeking out prospective donors, Prasad says he first asks a brain dead patient’s family if they would be willing to donate the eyes. “If they agree, then we can think of asking for more organs. If they say no, there is no point in asking for a hand,” he says. “To ask for a hand is difficult; relatives may get angry. Donating a kidney or liver is acceptable. But to give an external body limb is an emotional decision,” says Dr Mathew.

When the first amputee was registered, it took a year to find a hand donor. Five families refused before Prasad managed to counsel the brother of the sixth, Binoy Uttaman Oliparambil, a 26-year-old brain dead after a road accident. His family eventually agreed to donate all possible organs. A little before 8 pm on January 12, 2015, Binoy became the country’s first successful cadaver hand donor. Doctors immediately got to work, splitting into four teams — two to harvest each hand and two to attach them. By 2 am, the donor’s hand was sliced a little below the wrist and brought to the operation theatre in a plastic bag filled with ice. Each nerve, artery, muscle was stitched to a blue tag and labelled.
Binoy Oliparambil's father Uttaman convinced his family to donate his son's hands, saying that being paralysed for 17 years, he knew what it felt like to be disabled (Express Photo by Nirmal Harindran)

The recipient was already on the operating table under anaesthesia. His forearm bones were then joined by screws and plates to the donor’s bones. Two arteries and six veins were attached by circumferential suturing. The vein is thinner than a human hair and its attachment is important to carry deoxygenated blood. The surgeons next joined six veins, the growth of which can take two months before proper sensation returns to the body. The most challenging part followed — to join the tendon muscles. “Each muscle is responsible for flexing of a finger joint, and they have to be attached at the right tension to allow relaxation and stretching of the hand,” says reconstructive surgeon Dr Kishore P.

The surgery took 16 hours, followed by more moments of tension. When a severed hand is successfully reattached, there is ‘pink-up’, meaning the recipient’s skin turns rosy, indicating that blood flow has begun. Here the donated hand lay pale white. But just as the team had begun doubting the success of its maiden surgery, plastic surgeon Dr Mohit Sharma noticed that the hand was turning pink.

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Always, says Baby Oliparambil, 49, she always holds the hands of Manu T R, 32, when he visits her house. “I am happy to see my son’s hands,” she adds, eyes moist. As Manu pats her head, a clear stitch running along the skin separates his forearm from a fairer hand. The long supple fingers once belonged to glass painter Binoy Uttaman Oliparambil. Baby remembers the day Binoy met with a bike accident, on January 11, 2015. “I didn’t know until the neighbours came to console me,” she recollects. She left her bed-ridden paralysed husband at home to rush to Binoy’s side at the hospital. “I shook him. I thought he would respond but he didn’t.”

Her elder son Bijoy explained to her what brain death meant and told her that doctors had sought permission to harvest his organs to help other patients. Baby initially refused, but when she spoke with husband Uttaman, he urged
Her to give consent. “I fell from a tree 17 years ago. Since then, I’ve been bed-ridden. I know what it is like to feel physically challenged,” says 56-year-old Uttaman as he strings a rosary to offer in a nearby church. Over midnight, Binoy’s hearts, hands, liver, kidney and cornea were harvested, with the Oliparambils becoming perhaps the first family in the country to donate all possible organs of their son.

His body came home with prosthesis; white gloves covering the artificial hand. The showcase in the drawing room of their house displays three certificates honouring the Oliparambils. A framed picture of Manu alongside reads, “The greatest love is to give yourself to others.” Beside it, is a photo of Binoy. “Now that I think about it, we did the right thing,” Baby says. She dabs at her tears as Manu drapes an arm around her shoulder. “Manu is also my son now.” Last February, Binoy’s family and friends attended Manu’s wedding. “The marriage would never have been possible if I had no hands,” Manu says. He had met his wife Sreeja, a nurse, at AIMS.

Three years ago, Manu, then an event manager, had been pushed out of a speeding train following an argument with a bunch of boys who were smoking inside the compartment. It was 2.30 am. A fisherman found him the next morning. When he regained consciousness, he found both his hands had been amputated at the wrist. For a year, he shut himself at his home, becoming an alcoholic in the process. In 2014, his brother registered him for a hand transplant when AIMS got its licence. Over the next year, they waited.

“On January 12, I was with my father when the hospital called. They asked me to get admitted within two hours. There was finally a donor. For me, a mother agreeing to give her son’s hand is the greatest act of sacrifice,” Manu says. When he could use his new hands, he first wrote ‘Thank you’ to the Oliparambils. It took him a year of physical and occupational rehabilitation to grow nerve sensations and employ finer hand movements. It was in the rehabilitation department that he met Sreeja. The two say they grew close in a matter of months. Two months after the therapy was complete, Manu could
ride a bike. Sreeja proposed, and the families happily agreed. After his marriage, several amputees began visiting Manu: “Ten to 15 in a day. I had never seen so many people without hands.” He decided to work at AIMS, as a counsellor for amputees visiting the hospital.

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Jith Kumar Saji, 22, from Kannur, wants to become a driver once he is done with his rehabilitation. He has already bought a bike, although doctors have asked him not to ride it. “I will get a driving licence soon,” he says. The latest to successfully have a hand transplant, Jeetu, as everyone calls him, had the surgery in May 2016. Before him, Abdul Rahim, an Afghan army man, underwent the procedure. Rahim recently sent the hospital a WhatsApp video, of him holding a gun. “He has joined the army again. His life is almost like before,” an ecstatic Jeetu says.

Rahim had lost both his hands in a bomb blast, Jeetu lost his to electrocution. Over the past year, he has been living in a rented bungalow with his mother for daily physical and occupational therapy. His day begins with physical therapy, to improve the strength of his muscles. “We start slowly. The nerve fibres take time to grow and sensation may take two months to return,” says therapist Dr Ravi Sankaran. Jeetu then goes for occupational therapy to learn how to use his new hand for day-to-day work. He picks a nail from a hole and fixes it in another. He practises picking up a glass and drinking water. He arranges colourful cubes in a pattern. The entire therapy takes two hours. “I like to stay in hospital. So I follow Manu around after my session,” he says, as his still crooked fingers attempt to adjust the laptop bag’s strap on his shoulder.

Hand transplants, he adds, come at a price. He will have to take immuno-suppressants and medicines for life, and suffers the risk of kidney and liver malfunction, or skin cancer or infections like tuberculosis. That is why, says Dr Mohit Sharma, “We only suggest transplants for people who have lost
both hands.” Patients who can manage with one hand are advised to do so. The other reason for this is the sheer paucity of donors.

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Gleneagles Global Hospital in Chennai registered five years ago for hand transplants. Says Dr Selva Seetharaman, the hand surgeon, “We have two patients on wait list. But there are no donors.” In Maharashtra, since 2015, when KEM Hospital got the licence for hand transplant, not a single amputee has been registered in the regional waiting list. “We are going to conduct cadaver donation awareness in Shirdi to rope in worshippers,” says state organ transplant in-charge Dr Gauri Rathod.

In Puducherry, where the Jawaharlal Institute of Post Graduate Medical Education and Research (JIPMER) has the licence, plastic surgeon Dr Dinesh Kumar says three amputees are waiting for donors. “I myself go to talk to prospective donor families about hand transplant. But they are afraid of social implications if a severed body is taken for a funeral.”

Doctors have asked him to take it easy but Jeetu can’t wait to get a licence and start riding his motorcycle (Express Photo by Nirmal Harindran)

Kerala and Tamil Nadu account for the highest cadaver donations in the country. Kerala, however, has made its donation rules more stringent. It has now made video-recorded consent of the family mandatory. And brain deaths have to be declared through electroencephalogram (EEG) by four doctors, including one employed by the government and one from another hospital. Since the new rules came in, the cadaver donor count has dipped from 72 in 2016 to three this year in Kerala.

At AIMS recently, a Kochi family agreed to donate the organs of their son. They waited for eight hours, but when the hospital could not procure a government official to announce the patient as brain dead, the family had to proceed with the cremation. “We had hand recipients waiting, kidney patients waiting…,” says transplant coordinator Prasad.
That hasn’t stopped Shreya Siddanagowder, 19. A BTech student at Manipal University, the Pune girl was on her way to college in September 2016 when an accident severed both her forearms. Shreya hasn’t gone to college since. While her friends visit her, father S P Siddanagowder worries that won’t last. “Once they start studying, she will be all alone.” Mother Suma says, “It was her decision to get a hand transplant after we looked it up online.” Last week, Shreya came to Kochi and registered. “She is a brave girl,” Suma says. She is also a happy one. Since Shreya saw Manu and his hands, she hasn’t stopped smiling.