

Two lives saved in rare 'paired' liver donation

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Muhammad Khan, Kelly Bryan, Hina Khan. Photo: University Health Network

(HealthDay)—In a North American first, an anonymous living liver donation led to a rare paired living liver donor exchange in Canada last summer that saved the lives of two people with failing livers.

Kelly Bryan, 38, donated 70% of her liver to an adult stranger, Muhammad Khan, who needed a liver transplant. Then that recipient's wife, Hina Khan, donated more than half her liver to another stranger who needed a liver transplant.

Bryan's anonymous living liver donation to a dying patient enabled the transplant team to set up a rare paired liver exchange donation.

"I wanted to donate to a stranger because although they're not my friend or family member, they're still someone else's friend, family, loved one, and they deserve the gift of a new liver and new life," Bryan, a mother of three, said in a University Health Network (UHN) Transplant Program news release.

Living liver donation carries more risks than a living kidney donation, and it comes with a 0.3% [donor](#) risk of death and a 30% risk of complications following an adult-to-adult donation with the larger right liver lobe. This lobe is what both donors in this paired exchange donated.

Liver donation does not mean the permanent loss of liver tissue, however: The livers of both the donor and recipient grow back to full size approximately three months after the surgery, according to background information in the news release.

A team effort

In a paired-organ donation, donors whose blood is incompatible with a recipient are matched with another, compatible recipient, resulting in two new compatible pairs.

Organ donors must have a compatible blood type with the recipient. Bryan has the rare universal blood type O-negative, meaning she can donate blood to anyone. That made her extremely valuable as a potential donor. Only about 7% of people have O-negative blood.

Paired liver exchanges have been performed mainly in Korea and Hong Kong. There are no previously published reports of them in Europe or North America, according to the UHN Transplant Program in the province of Ontario.

The four simultaneous surgeries took place July 9, 2018 over 12 hours, and involved four operating rooms and a team of 28 staff and surgeons. In total, about 100 staff and physicians looked after the pairs before, during and after the surgeries.

Muhammad Khan, 54, was diagnosed with non-alcoholic liver cirrhosis in 2017.

"To my donor, I would like to say that I have the deepest regards for you. I appreciate what you did

from the depth of my heart. I salute you for doing such a tremendous job. For coming forward and helping me," Khan said.

As part of the donation network, Muhammad's wife, Hina Khan, 49, gave a portion of her liver to a stranger so that her husband could receive his liver transplant.

"It was important for me to save my husband's life. That is why I was willing to donate a part of my [liver](#) to somebody," she explained. "At the same time, it was saving two people's lives. I want more people to hear my story, and come forward, so they will also help each other."

The recipient of Hina's donation is doing well, but has asked to remain private.

Kindness of strangers

The [liver transplant](#) team had been waiting for about a year for the chance to save two lives simultaneously, according to UHN transplant surgeon Dr. David Grant.

Along with benefiting two patients immediately, an anonymous living [organ donation](#) also means that two patients on the deceased donors' waiting list get to move up two places, he noted.

Living donors are tested and evaluated for suitability, explained Zubaida Mohamed, [transplant](#) coordinator at the Living Donor Liver Program, UHN Transplant.

"Potential living donors feel they have a moral obligation to help someone in need simply because they can do it when they are healthy and alive," she said. "They believe in random acts of kindness without repayment of any kind."

More information: The American Liver Foundation has more on [liver transplantation](#).

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