“Liver in a Box” Machine Represents Major Change in Organ Transplant Process

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Massachusetts General Hospital recently became the first hospital in the United States to perform a liver transplant using a new high-tech machine doctors are calling the “liver in a box.” The device, officially named Organ Care System, or OCS, helps keep a donated organ operating and functioning as it does in the body, circumventing the traditional method of putting the organ on ice once it is removed, Boston’s WCVB reports.

The portable machine, made by TransMedics in Andover, Massachusetts, allows oxygen, blood and nutrients to flow into a donated liver while it is outside the body. This allows the organ to remain viable for longer and could allow for a liver to be transported farther when moved from donor to recipient.

The OCS also makes it possible for surgeons to more precisely monitor the quality of a donated organ and ensure it stays viable. Under current protocol, doctors typically discard livers they can’t be sure will function when transplanted. The OCS would help eliminate that uncertainty and therefore could also help make more organs available for people on transplant waiting lists.

Lloyd Matsumoto, PhD, a professor of biology at Rhode Island College who has been living with fatty liver disease for 30 years, was one of three lucky local patients to undergo transplant surgery using OCS. His doctors report that he is doing “very well” post-surgery.

However, others hoping to use the machine for their own surgeries may have to wait a little bit longer. The OCS is undergoing clinical trials and has not yet received full approval from the FDA.

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