'Love handles' repurposed for breast reconstruction in women without enough belly fat

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A new technique using tissue from those below-the-waist "love handles" improves cosmetic breast reconstruction in slim, athletic cancer patients without adequate fat sources elsewhere, a small Johns Hopkins study has found. The method also turns out to be less complicated than other options for surgeons as well, the research shows.

Plastic and reconstructive surgeons from the Johns Hopkins University School of Medicine describe the procedure they developed in a paper published in the online version of the journal *Microsurgery*, based on experience from their work on cadavers and on 12 breast cancer patients over the course of a year.

"When implants aren't used, the most common technique for reconstructing breasts after a mastectomy is to make breast tissue from a flap of fat and skin from the abdominal region," says Ariel N. Rad, M.D., Ph.D., an assistant professor of cosmetic surgery and plastic and reconstructive surgery at the Johns Hopkins University School of Medicine and one of the study's leaders. "Thin, athletic women don't have enough tissue there. But even they often have some excess fatty tissue in that space between the hip and waist. For them, using those love handles is a new option."

Traditionally, the best alternative to the tummy-tuck option for such women has been a flap of skin and fat from the buttocks. While safe and

effective, SGAP, named for the use of the superior gluteal artery perforator, is usually deforming (taking a large chunk of tissue from the buttocks flattens its usual rounded appearance), often requires follow-up surgery to reshape the buttocks, and provides surgeons with a piece of tissue whose blood vessel length often makes it difficult to connect to a vessel in the chest, Rad says.

Rad and his colleagues came up with the idea of using the love handles when they noticed a blood vessel underneath the buttocks while doing an SGAP procedure. They wondered if that blood vessel was found in all patients and whether it could be used for a surgery that improved the shape of the buttocks and hip region as opposed to causing deformities. Dissecting cadavers and using CT scanning, the team determined the vessel was available in 60 percent of patients. Later, when they performed the new procedure in 12 patients at Johns Hopkins from February 2008 to February 2009, they found the length of vessel needed to connect to mammary blood vessels tended to be twice as long as those used in SGAP.

That made the new surgery less complicated to perform, Rad says. All 12 of the patients in the study had successful breast reconstruction using the new version of the SGAP, known as the LSGAP (lateral septocutaneous perforating branches of the superior gluteal artery).

Surgeons used the new vessel in about half of the procedures, but were able to achieve a good cosmetic result in all of them, Rad says.

The operation, performed with the help of a microscope, connects small blood vessels from a flap composed of skin and fat from the love-handle region to the mammary blood vessels beneath the rib cage. When the tail of the blood vessel is longer, as in the LSGAP surgery, it is easier for the surgeon to carefully connect the two tiny tubes together.

Rad cautions that not every thin patient is a candidate for the new technique.

But in those for whom it is available, LSGAP actually improves the contour of the patient's waist and hip area, Rad says.

"If you're not a candidate for an abdominal flap and you want to use your own tissue, you're not without options," he says. "This is a refinement of previously deforming surgery."

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