

Pump up the volume

Addition of fat grafting for volumetric enhancement to surgical contouring procedures has become mainstream in cosmetic surgery

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NEW YORK — When it comes to breast augmentation/mastopexy and even facial rejuvenation, surgical shaping alone is not enough, say surgeons who combine such procedures with volumetric enhancement to attain results that they say are not possible with either modality alone.

"Fat gave us a tool to shape the face and body in three dimensions that we simply never had before," says Sydney Coleman, M.D., a New York surgeon. "And now that there are so many other fillers available and in demand, the practice of adding volume is here to stay."



Dr. Coleman

The combination of volume enhancement with surgical shaping should be a standard part of every aesthetic surgeon's armamentarium, says Nashville, Tenn., surgeon Patrick Maxwell, M.D.

"These should not be viewed as different operations but rather required additive techniques within a given procedure to achieve improved outcomes," he says. "One plus one is more than two. Volumetric enhancement plus surgical shaping advances the predictability and desirability of outcomes beyond what either of these techniques could do alone."

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VECTOR OF AGING Historically, people identified the vector of aging as being a downward phenomenon, Dr. Coleman says. "For quite a long time, the focus of plastic surgery was to lift anything that sagged. It's taken us the last 15 years of readjusting the way we think to realize that the removal of the signs of aging like wrinkling and jowls by cutting them out really doesn't restore a youthful look; it deforms a person's face into something that has no wrinkles or jowls but does not look the way it looked when the person was young.

"We've gradually figured out that if you don't address the loss of fullness, it doesn't result in rejuvenation," he adds. "It just results in deformities that remove the signs the aging."

Says Dr. Maxwell, "Over the years, surgeons have become able to add predictable fat transfer to

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surgical tissue tightening or enhancement. Beginning with the addition of small-volume fat transfer combined with facelifts, mostly enhancing the malar area, surgeons have become accustomed to techniques of fat removal, cell washing and simple yet refined injection of fat layering into the tissues.

“Additionally, in breast reconstruction, this has long been a frequently used technique where smaller volumes of fat help blend implant contours into the chest or fill chest deformities in combination with implants,” Dr. Maxwell adds. “These applications have enabled surgeons to become predictable in fat transfer techniques, which has led to adaptation, with more sophistication in other areas.”

UP FOR THE CHALLENGE Fat transfer for volumetric enhancement and acellular dermal matrices (a form of biologic scaffolding) have enabled surgeons to increase volume over and around breast implants effectively, Dr. Maxwell says.

“These combinations of regenerative techniques plus implants have made even the most challenging breast revision cases involving multiple capsular contractures, repeated bottoming out, stretched deformities and ptosis to be predictably revised with consistently improved outcomes,” he says, adding that this has led to the frequent use of fat grafting in primary aesthetic breast surgery. For example, one could use enhanced fat grafting after placing breast implants to augment the smaller breast or to simply enhance cleavage, he explains.

“Shaped, form-stable implants enhance predictability in breast form, and adding fat grafting or biological scaffolds may further enhance the volume in addition to surgical reshaping and contouring,” Dr. Maxwell says.

Minimally invasive facial suspension and tightening procedures also benefit from volumetric enhancement with fat grafting, Dr. Maxwell says.

“As both of these techniques are minimally invasive and give

desired improvement with long-lasting results, increasing numbers of patients opt for these facial procedures.

“Likewise, in either primary breast aesthetic procedures of mastopexy or perhaps augmentation, the enhancement with predictable fat grafting is significant,” he says. “Especially in challenging aesthetic breast revisions, the addition of ‘regenerative’ volume is helpful.”

Breast techniques that are complemented by the addition of volume include capsulectomy, site change from over the muscle to subpectoral position, creation of neopectoral pockets and mastopexy, according to Dr. Maxwell.

“Acellular dermal matrix scaffolds can support tissue or minimize the possibility of recurrent capsular contracture by adding a regenerative surface layer between the implant and the tissue, and fat grafting further refines the shape with precisely desired aesthetic outcomes,” he says.

REJUVENATION BENEFITS Sculpting with fat injections offers a more youthful look just by virtue of the additional volume, but fat injections offer an added rejuvenation bonus, Dr. Coleman explains.

“Fat has the added benefit of rejuvenating the skin. It actually improves the quality of the skin, the wrinkles, the color, the size of the pores. All of these are improved dramatically by the placement of fat right next to the skin,” he says. “Although volume is an important element, I think the restoration of the quality of the skin that takes place is equally, if not more, important.”

While the mechanism of action regarding fat’s reparative capabilities is up for debate, Dr. Coleman says there is consensus in the aesthetic surgical community that skin quality improves in response to fat injections or grafts.

“It probably has something to do with the fat’s stem cells, and it also has something to do with the stem cells releasing growth factors,” he says. “There are a lot of unknowns. We are just beginning to scratch the surface.” ♦