Reduction Mammaplasty for Breast-Related Symptoms

Policy Number: MM.06.012
Original Effective Date: 11/12/2002
Line(s) of Business: HMO; PPO; QUEST Integration
Current Effective Date: 04/22/2016
Section: Surgery
Place(s) of Service: Outpatient

I. Description

Reduction mammaplasty is a surgical procedure designed to remove a variable proportion of breast tissue. The available evidence from randomized controlled and prospective studies indicates that reduction mammaplasty is effective at decreasing breast-related symptoms such as pain and discomfort. There is also evidence that functional limitations related to breast hypertrophy are improved following reduction mammaplasty. Therefore, the available evidence for reduction mammaplasty is sufficient to demonstrate improvements in net health outcome. Reduction mammaplasty may be considered medically necessary in patients with macromastia, who have a minimum 6-week history of shoulder, neck, or back pain that is not responsive to conservative therapy and not caused by any other identifiable condition. Reduction mammaplasty may also be considered medically necessary in patients with recurrent or chronic intertrigo between the pendulous breast and the chest wall.

Macromastia, or gigantomastia, is an ill-defined term that describes breast hyperplasia or hypertrophy. Macromastia may result in clinical symptoms such as shoulder, neck or back pain, or recurrent intertrigo in the mammary folds. In addition, macromastia may be associated with psychological or emotional disturbances related to the large breast size.

II. Criteria/Guidelines

Reduction mammaplasty is covered (subject to Limitations and Administrative Guidelines) for the treatment of macromastia when well-documented clinical symptoms are present, including but not limited to:

A. Documentation of a minimum 6-week history of shoulder, neck or back pain related to macromastia that is not responsive to conservative therapy, such as an appropriate support bra, exercises, heat/cold treatment, and appropriate nonsteroidal anti-inflammatory agents/muscle relaxants; or

B. Recurrent or chronic intertrigo between the pendulous breast and the chest wall that has not responded to appropriate topical therapy.
III. Limitations

A. Reduction mammaplasty is not covered when the primary purpose for performing the procedure is to address poor posture, headaches, breast asymmetry, pendulousness, problems with clothes fitting and nipple-areolar distortion, or psychosocial issues.

B. Reduction mammaplasty is not covered for breasts that are in a state of rapid flux (e.g., due to adolescence, lactation).

IV. Administrative Guidelines

A. Precertification is required. To precertify, complete HMSA's Precertification Request and mail or fax the form as indicated.

B. The following documentation must be submitted with your precertification request:
   1. Photographs or digital images; and
   2. Description of symptoms and specific therapies that have been tried and failed; and
   3. The patient's height and weight and the anticipated amount of breast tissue to be removed.

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<th>CPT Code</th>
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V. Rationale

This evidence review was originally created in 1995 and has been updated with searches of the MEDLINE database. The most recent literature review was performed for the period of October 2014 through January 20, 2016. The following is a summary of the key findings to date.

Efficacy in Reducing Symptoms

Observational Studies

Singh and Losken (2012) reported on a systematic review of studies reporting outcomes after reduction mammaplasty. The reviewers found reduction mammaplasty improved functional outcomes including pain, breathing, sleep, and headaches. Additional psychological outcomes noted in the review include improvements in self-esteem, sexual function, and quality of life (QOL).

In 2002, Kerrigan et al published the results of the BRAVO (Breast Reduction: Assessment of Value and Outcomes) study, a registry of 179 women undergoing reduction mammaplasty. Women were asked to complete QOL questionnaires and a physical symptom count both before and after surgery. The physical symptom count focused on the number of symptoms present that were specific to breast hypertrophy and included upper back pain, rashes, bra strap grooves, neck pain, shoulder pain, numbness, and arm pain. In addition, the weight and volume of resected tissue were recorded. Results were compared with a control group of patients with breast hypertrophy, defined as size DD bra cup, and normal-sized breasts, who were recruited from the general population. The authors propose that the presence of 2 physical symptoms might be an appropriate cutoff for determining medical necessity for breast reduction. For example, while 71.6% of the hypertrophic controls reported none or 1 symptom, only 12.4% of those considered surgical candidates reported none or 1 symptom. This observation is difficult to evaluate because the study does not report how surgical candidacy was determined. The authors also reported that none of the traditional criteria for determining medical necessity for breast reduction surgery
(height, weight, body mass index [BMI], bra cup size, or weight of resected breast tissue) had a statistically significant relationship with outcome improvement. The authors conclude that the determination of medical necessity should be based on patients’ self-reported symptoms rather than more objectively measured criteria, such as weight of excised breast tissue.

**Randomized Controlled Trials**

In 2008, Sabino Neto et al assessed functional capacity in which 100 patients, ages 18 to 55 years, were randomized to reduction mammaplasty or waiting list control. At the onset of the study and 6 months later, patients were assessed for functional capacity using the Roland-Morris Disability Questionnaire (0=best performance, 24=worst performance) and for pain using a visual analog scale (VAS). The reduction mammaplasty group showed improvement in functional status with an average score of 5.9 preoperatively to 1.2 within 6 months postoperatively (p<0.001 for pre-post comparison within the mammaplasty group) versus an unchanged average score of 6.2 in the control group on the first and second evaluations. Additionally, pain in the lower back region decreased on VAS from an average of 5.7 preoperatively to 1.3 postoperatively (p<0.001 for pre-post comparison within the mammaplasty group) versus VAS average scores in the control group of 6.0 and 5.3 on the first and second evaluations, respectively (no significant change).

Also in 2008, Saarinemi et al reported on QOL and pain in 82 patients who were randomized to reduction mammaplasty or a nonoperative group and evaluated at baseline and 6 months later. The authors reported that the mammaplasty group had significant improvements in QOL, as measured by the Physical Component Summary score of the 36-Item Short-Form Health Survey (SF-36; change, +9.7 vs +0.7, p<0.001), the Utility Index score (SF-6D; change, +17.5 vs +0.6), the index score of QOL (SF-15D; change +8.6 vs +0.6, p<0.001), and the SF-36 Mental Component Summary score (change, +7.8 vs -1.0, p<0.002). There were also improvements in breast-related symptoms, as measured by the Finnish Breast-Associated Symptoms questionnaire score (-47.9 vs -3.5, p<0.001), and the Finnish Pain Questionnaire score (-21.5 vs -1.0, p<0.001).

Iwuagwu et al reported on 73 patients randomized to receive reduction mammaplasty within 6 weeks or after a 6-month waiting period to assess lung function. All patients had symptoms related to macromastia. Postoperative lung function correlated with the weight of breast tissue removed, but there were no significant improvements in any lung function parameters for the mammaplasty group compared with the control group.

Beraldo et al reported trial of 60 patients randomized to receive reduction mammaplasty or no surgery. The study outcomes were sexual function and depressive symptoms. At 6 months, Female Sexual Function Index scores were higher in the reduction mammaplasty group (27.5 vs 22.5, p<0.001). Level of depression, as measured by the Beck Depression Inventory, was lower in the reduction mammaplasty group (7.2 vs 13.7, p=0.01). Analyses using categories of sexual function or depression showed similar results.

**Studies Reporting Complications**

Thibaudeau et al (2010) conducted a systematic review to evaluate breastfeeding after reduction mammaplasty. After a review of literature from 1950 through December 2008, the authors concluded that reduction mammaplasty does not reduce the ability to breastfeed. In women who have had reduction mammaplasty, breastfeeding rates were comparable in the first month postpartum to rates in the general population in North America.
In 2011, Chen et al reported on a review of claims data to compare complication rates after breast surgery in 2403 obese and 5597 nonobese patients. Of these patients, breast reduction was performed in 1939 (80.7%) in the study group and 3569 (63.8%) in the control group. Obese patients had significantly more claims for complications within 30 days after breast reduction surgery than nonobese patients (14.6% vs 1.7%, respectively, p<0.001). Complications included inflammation, infection, pain, and seroma/hematoma development. Also in 2011, Shermak et al reported on a review of claims data to comparing complication rates in relation by age after breast reduction surgery in 1192 patients. Infection occurred more frequently in patients older than 50 years of age (odds ratio [OR], 2.7; p=0.003). Additionally, women older than 50 years experienced more wound healing problems (OR=1.6; p=0.09) and reoperative wound débridement (OR=5.1; p=0.07). Other retrospective evaluations of large population datasets have reported an increased incidence of perioperative and postoperative complications with high BMI.

**Section Summary: Efficacy in Reducing Symptoms**
Several randomized trials and observational studies have shown improvements in several measures of function and QOL.

**Ongoing and Unpublished Clinical Trials**
A search of ClinicalTrials.gov in January 2016 did not identify any ongoing or unpublished trials that would likely influence this review.

**Summary of Evidence**
The available evidence for reduction mammoplasty in individuals who have symptomatic macromastia includes randomized controlled and case series. Relevant outcomes are symptoms and functional outcomes. These studies indicate that reduction mammoplasty is effective at decreasing breast-related symptoms such as pain and discomfort. There is also evidence that functional limitations related to breast hypertrophy are improved following reduction mammoplasty. These outcomes are achieved with acceptable complication rates. Overall, reduction mammoplasty in appropriately selected patients is associated with improvements in several important health outcomes.

**Practice Guidelines and Position Statements**
The American Society of Plastic Surgeons (ASPS) has issued practice guidelines and a companion document on criteria for third-party payers for reduction mammoplasty. ASPS indicates level I evidence has shown reduction mammoplasty is effective in treating symptomatic breast hypertrophy which “is defined as a syndrome of persistent neck and shoulder pain, painful shoulder grooving from brassiere straps, chronic intertriginous rash of the inframammary fold, and frequent episodes of headache, backache, and neuromas caused by heavy breasts caused by an increase in the volume and weight of breast tissue beyond normal proportions.” ASPS also indicates volume or weight of breast tissue resection should not be criteria for reduction mammoplasty. If 2 or more symptoms are present all or most of the time, reduction mammoplasty is appropriate.

**U.S. Preventive Services Task Force Recommendations**
Not applicable.
**Medicare National Coverage**

There is no national coverage determination (NCD). In the absence of an NCD, coverage decisions are left to the discretion of local Medicare carriers.

**VI. Important Reminder**

The purpose of this Medical Policy is to provide a guide to coverage. This Medical Policy is not intended to dictate to providers how to practice medicine. Nothing in this Medical Policy is intended to discourage or prohibit providing other medical advice or treatment deemed appropriate by the treating physician.

Benefit determinations are subject to applicable member contract language. To the extent there are any conflicts between these guidelines and the contract language, the contract language will control.

This Medical Policy has been developed through consideration of the medical necessity criteria under Hawaii’s Patients’ Bill of Rights and Responsibilities Act (Hawaii Revised Statutes §432E-1.4), generally accepted standards of medical practice and review of medical literature and government approval status. HMSA has determined that services not covered under this Medical Policy will not be medically necessary under Hawaii law in most cases. If a treating physician disagrees with HMSA’s determination as to medical necessity in a given case, the physician may request that HMSA reconsider the application of the medical necessity criteria to the case at issue in light of any supporting documentation.

**VII. References**

### VIII. Appendix

#### Table 1. Schnur Sliding Scale

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<th>Body Surface Area, m²*</th>
<th>Breast Weight, g</th>
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*Calculation of body surface area: \( \text{Body surface area} = \text{the square root of height (cm) times weight (kg)} \div 3600 \)

To convert pounds to kilograms, multiply pounds by 0.45.
To convert inches to meters, multiply inches by 0.0254.