

## GÖĞÜS KÜÇÜLTME AMELİYATI BOYUN VE BEL AĞRISINI DÜZELTİR Mİ: GERÇEK YA DA KURGU MU? DOES BREAST REDUCTION IMPROVE BACK AND NECK PAIN: FACT OR FICTION?

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### ÖZET

Bu çalışmanın amacı göğüs küçültme operasyonuna başvuran hastaların ne kadarının bel ve boyun ağrısı temel sebebi ile başvurduğunu analiz etmek ve operasyonun bu sorunlara ne kadar yardımcı olduğunu anlamaktır. Son iki yılda göğüsleri küçültülen 46 hasta, telefon aracılığı ile görüşüldü ve standart anket yapıldı. Hastaların boyun ve bel ağrıları, Oswestry puan sistemi kullanılarak hesaplandı.

Araştırma sırasında, 28 hastada operasyondan önce bel ağrısı olduğu bulundu (21'i aralıklı ağrıdan) ve 7'si ise devamlı ağrıdan şikayetçiydi; 15 hasta ise boyun ağrısından şikayetçiydi (12'si devamlı, 3'u aralıklı) ağrıdan oluşmaktaydı. Operasyon sonrası, 22 hasta ağrılarının tamamen düzeldiğini, 41 hasta ise vücudun duruş hizasının düzeldiğini rapor etti. İlk hususta, ameliyat öncesi saptanmış boyun ağrı ortalamasının 6 derecesinden ameliyat sonrası 1'e indiği gözlenmiştir. Bel ve sırt ağrılarının da aynı eğilimi gösterip ameliyat öncesi 7 değerinden ameliyat sonrası 3 değerine indiği gözlenmiştir.

Araştırma bulguları, bel ve boyun ağrılarında azaltma amacıyla göğüs küçültme operasyonuna gidilmesinin, açıkça uygun olduğunu göstermekte ve önemli ölçüde hastaların semptomlarını azalttığını kanıtlamaktadır.

Anahtar Kelimeler: Göğüs küçültme, bel ağrısı, boyun ağrısı ve vücut durusu.

### ABSTRACT

The aim of this study was to identify whether back and neck pain was the main presenting complaint of patients attending for breast reduction and if that was remedied by the procedure. 46 patients that had breast reductions performed during the last 2 years were interviewed via telephone. Pain was graded by using the Oswestry scoring system.

Back pain was present in 28 patients with 21 complaining of intermittent and seven of continuous pain; whereas 15 patients complained of neck pain with 12 reporting continuous and three intermittent pain. 41 patients reported improvement in posture and 22 patients noted that their pain had resolved completely after their operation. In particular, pre-operative neck pain score had reduced from average of 6 to 1. Back pain being no exception had also shown similar trend with average pre-operative score reducing from 7 to 3 after reduction mammoplasty.

The results demonstrate clearly that pain to the back and neck is a very feasible reason to undergo breast reduction surgery, as it has been shown to dramatically improve symptoms.

Keywords: Breast reduction, posture, back pain, mammoplasty

## INTRODUCTION

Mammary hypertrophy, an increase of the mammary gland beyond physiologic limits,<sup>1</sup> can cause pain in the neck, lower back and shoulder regions.<sup>2,3</sup>

Despite these findings and the amount of literature correlating improved patient outcome, both functional and symptomatic, debate continues whether reduction mammoplasty is medically necessary.<sup>4</sup>

## PATIENTS AND METHODOLOGY

During the period from January 2006 to January 2008, 72 female patients underwent breast reduc-

tion. Six patients did not have any contact details and 20 patients either did not answer their telephone or declined to take part in our study. We interviewed 46 of them over the telephone, using a standardized questionnaire to ensure uniformity.

They were asked questions relating to their main motivating factor for undergoing the procedure, the character of the pain they suffered, their pain score (1 mild to 10 severe) both before and after surgery and finally improvement in pain and posture.

We chose this format of study because we

wanted to obtain purely subjective results, depending entirely on the patient's experience and personal feelings, when they compared themselves, before and after surgery (Figure 1).

### RESULTS

The age of our patient cohort ranged between 19 to 71 years, with an average of 42 and a median age of 41.5. Principally, neck and back pain appeared to be the main reason for our cohort of patients undergoing mammoplasty.

Two patients revealed that they had their operation for additional purposes other than pain only: one

was not happy with her large breast and the other patient noted (daily) skin irritation from bra straps as an important reason for undergoing a breast reduction.

The average time patients had been suffering with pain was 12.9 years (minimum two and maximum 21 years). The main complaint in 28 parties was back pain (21 complained of intermittent pain versus seven with continuous pain); of these, 17 patients complained of thoracic pain and eleven of lumbar backache.

Seventeen patients complained of neck pain

<b>Questionnaire</b>	
<b>1. What was your main reason for having a breast reduction?</b>	Neck pain Back pain Other (specify)
<b>2. Do you have any history of trauma or surgery to your back?</b>	Yes No
<b>3. Have you seen any medical professional for you pain? If so please specify.</b>	
<b>4. How long have you been experiencing pain in a period preceding the breast reduction surgery?</b>	
<b>5. How would you score your pain out of 10 before the operation (0 = no pain, 10 = worst pain ever)?</b>	
<b>6. How would you describe the character of your pain before the operation?</b>	Intermittent Constant
<b>7. How would you score your pain out of 10 after the operation (0 = no pain, 10 = worst pain ever)?</b>	
<b>8. Has the breast reduction improved your pain?</b>	Yes No

Figure 1: A copy of the questionnaire given to patients.

with 14 reporting continuous pain and three intermittent. No one of the patients complained of a combined back and neck or combined thoracic and lumbar pain.

During the surgery, an average of 1290g of breast tissue was removed (with a minimum of 260g and a maximum of 3045g) from each breast.

It emerged from our study that eight of our patients had suffered from a previous back problem (road traffic accidents/falls = 4, osteoarthritis = 1, back surgery = 1 and kyphosis = 1) with a pain intensity score on average of 7 (range = 6 – 10). However, all eight reported substantial improvement to their presenting complaint following their breast reduction, reducing their average pain intensity score to three (Figure 2).

The data analysis had revealed that 22 patients sought a medical help prior to consultation with their plastic surgeon, without any long term improvement to note: 19 visited their general practitioner or physiotherapist, two saw a chiropractor and one visited an osteopath (alternative medicine practitioners).

For the patients with neck pain: Pre-operative pain score was observed to be between 1 and 10,

with an average score of 6, whereas the post-operative pain ranged from 0 – 4, with an average score of 1.

For the patients with back pain: Pre-operative pain scored was between 1 and 10, with an average score of 7, whereas post-operative pain ranged from 0 to 7 with an average score of 3.

Concluding data of the study showed that all 45 patients found an improvement in their pain with 22 patients confirming that their pain had resolved completely. 42 scored their post-operative pain at or below three points. 41 of the 45 patients reported a subjective improvement in posture.

## DISCUSSION

Biomechanically, increasing breast size shifts the centre of gravity of the human body anteriorly and causes increased cervical lordosis, increased thoracic kyphosis and a compensatory increase in the lumbar lordosis.<sup>3</sup> The increased cervical lordosis places strain on the extensor muscles of the neck and causes compression on the intervertebral discs posteriorly.

This can cause soft tissue fatigue and later bony change such as osteophyte formation and the

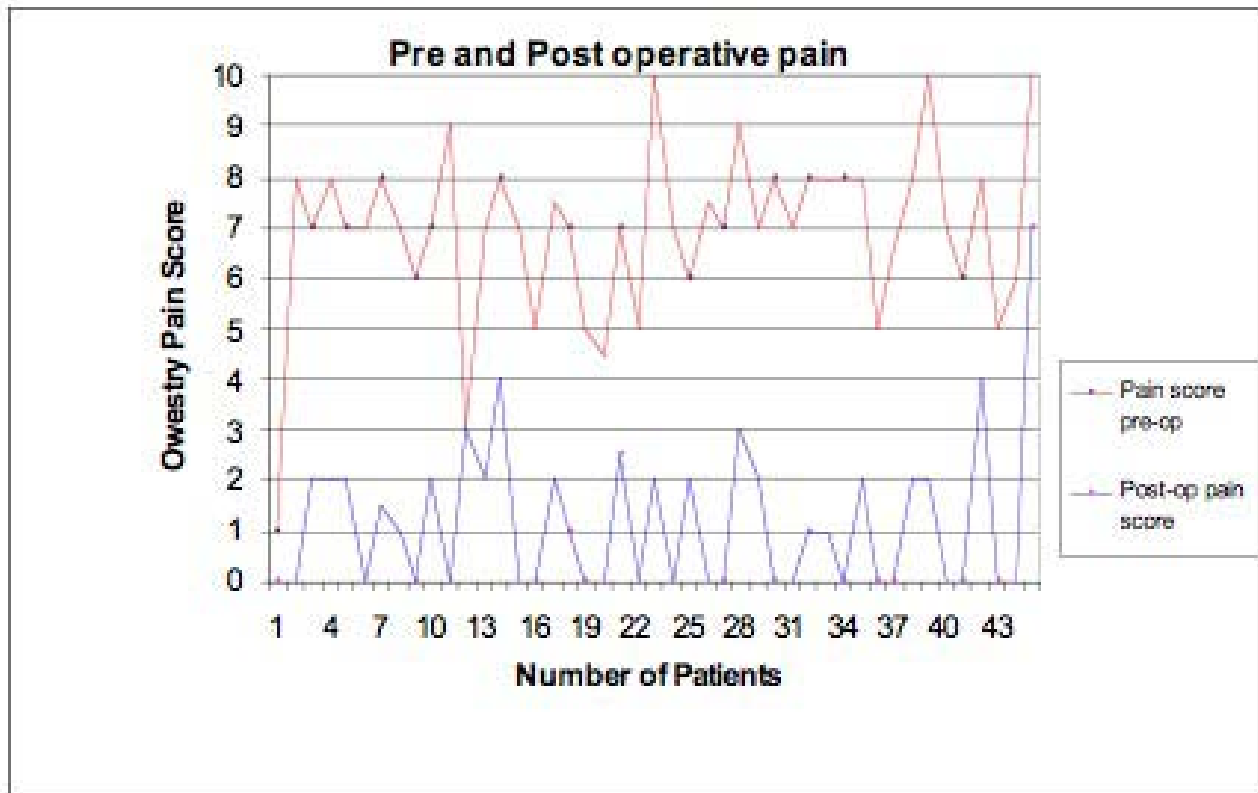


Figure 2: Pre- and Postoperative pain scores depicted for each subject undergoing reduction mammoplasty.

chance of spondylosis, accounting for the symptoms of neck pain seen in patients with mammary hypertrophy.

The increased lumbar lordosis places undue strain on the anterior longitudinal ligament and the facet joints. These structures being highly innervated eventually give rise to pain when degenerative changes occur.<sup>4</sup>

Poor posture and brassiere strap discomfort are among the other complaints associated with large breasts. Bad posture is usually a conscious effort by the patient to conceal the large breasts, and it is partially due to spinal curvature changes associated with a shift in the centre of gravity.<sup>5</sup> This in turn aggravates and exacerbates the pain and discomfort in the inflamed spine.

Freire et al. (2007) concluded in their study, which looked at patients with shoulder, lower back and neck pain, that breast reduction in these patients does indeed reduce these symptoms.

Comparing our data to Freire's work, the first thing to highlight is that their cohort was almost double the size of ours, but that they used half their patient number as a control group by putting them on to a six month waiting list – a step we omitted. In terms of similarity, both studies were purely based on the patient's own feelings and subjective opinions, derived from the individual's body awareness.

In addition to the above, it is worth noting that in the Freire's study the mean breast tissue weight removed was 1052 +/- 188 g. Our study on the other hand showed a much broader range, with average weight resection being 1290g, with a minimum of 260g and a maximum of 3045g, from each breast.

Interestingly, both studies showed a truly remarkable drop in the suffering patients experienced following a breast reduction surgery.

## CONCLUSION

The results of this study clearly demonstrate that back pains, followed by neck pain, are the commonest complaints in our study group. Furthermore this study reveals the significant impact breast reduction surgery offers in improving the pain and posture of patients, as demonstrated by these purely subjective results.

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## REFERENCES

1. Foged J. Symptomatology ved mamma hypertrofi. Ugeskr Laeg. 1958;115: 439
2. Freire M, Neto MS, Garcia EB, Quaresma MR, Ferreira LM. Functional capacity and postural pain outcomes after reduction mammoplasty. *Plast Reconstr Surg.* 2007; 119(4): 1149-56
3. Letterman G, Schurter M. The effects of mammary hypertrophy on the skeletal system. *Ann Plast Surg.* 1980; 5(6): 425-31
4. Fredricks S. Skeletal and postural relations in augmentation mammoplasty. *Ann Plast Surg.* 1978; 1:44
5. Chadbourne EB, Zhang S, Gordon MJ, Ro EY, Ross SD, Schnur PL, Schneider-Redden PR. Clinical outcomes in reduction mammoplasty: a systematic review and meta-analysis of published studies. *Mayo Clin Proc.* 2001; 76(5): 503-10