Massage Therapists' Association of British Columbia

Clinical Case Report Competition

Utopia Academy

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Third Place Winner

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Exploring an anterior body treatment approach to chronic back pain

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Abstract

Objective:

This case study explores an unconventional approach to the treatment of chronic back pain. The choice was made to treat the patient in a way which she had not yet experienced – treating only her anterior body structures. The theory of treating antagonistic structures (*Rattray, 2000 – 'Fifth Principle of Massage' pg.65)* was the basis for my treatment planning, which in this case, was hypothesized to be primarily the scar tissue from her breast reduction surgery.

Methods:

Ten treatments were given that were 90 minutes in length, between 0-3x/week, over a period of 47 days. The treatment approach used a variety of techniques such as myofascial release, lymphatic drainage, joint mobilization, passive stretching, hydrotherapy and swedish massage techniques.

Results:

An objective increase in chest expansion of 1 cm was observed at all measured locations after treatment #5 (*Figure 1.0)*. Visual observations indicating decreased fascial adhesions in the costal & surgical scar regions were noted in the assessment photographs. An overall 'lengthening' of the patients torso was also objectively observed in the photographs, as well as reported subjectively as a positive outcome by the patient. At the time of final assessment, no subjective pain was felt in the thoracic back area; cervical discomfort was still present. Patient reported increased digestive regularity and was experiencing daily bowel movements as of the final assessment.

Conclusion:

In the case of this patient's specific body presentation and health history, this course of treatment was found to be significantly effective. The results of this case study may indicate that massage therapy techniques effectively increase structural mobility, positively alter the relationship between structure and function, as well as improve digestive function. To determine whether or not an anterior body treatment approach could have equally positive results on all patients with chronic back pain, more research would be required with a larger case study group as well as more consistently administered treatments.

Keywords List: Massage Therapy, Anterior Body, Chronic Back Pain, Scar Tissue

Introduction

Chronic back pain is defined as back pain which lasts for more than 3 months after the initial onset (*Bogduk, N. McGuirk, B. 2002 – Pg.113).* Current Canadian statistics report that 4 out of 5 adults will experience at least one episode of back pain at some point in their lifetime, at an average age of 30-50 years old. Statistics also state that in 85-90% of back pain patients, no specific cause for their pain can be identified (*2006, stats Canada*). Traditionally, chronic back pain is managed through chiropractic adjustments, medications (such as muscle relaxants & non-steroidal anti-inflammatory drugs), and manual therapies to decrease muscular hypertonicity and spasticity along the spinal column. This case study explores an unconventional approach to the treatment of chronic back pain. After discovering that this patient had received years of treatment from a variety of therapeutic modalities with little to no relief, the choice was made to treat her in a way which she had not yet experienced – treating only her anterior body structures. The theory of treating antagonistic structures (*Rattray, 2000 – 'Fifth Principle of Massage' pg.65)* was the basis for my treatment planning, which in this case, I hypothesized to be primarily the scar tissue from her breast reduction surgery. Chronic pain may be caused by abnormalities in collagen maturation during scar production. If an excess of collagen is produced which is oriented away from normal lines of stress, cross-links may be formed, and the scar tissue may adhere to adjacent structures (Hertling & Kessler 2006 – Pg.104) – in this case the ribcage and myofascial systems.

Subject Case History

The patient is a 34 year old, height/weight proportionate female who works as a publicist and amateur stand up comedienne. She drives an automatic transmission vehicle on a daily basis for work and personal travel within Vancouver. Her sleep patterns average at 6 hours per night, and she does not have a consistent exercise regime. Consumed pharmaceuticals are restricted to her daily birth control pill (Alesse 21 - for management of moderate menstrual pain), and antibiotics when necessary (She contracted a sinus infection and was on a course of antibiotics between treatments #5 & #6). She had a bilateral breast reduction surgery in 2000, followed by a car accident in 2001, in which she was the driver, was wearing a seatbelt, and was rear-ended. She was in another similar accident in 2007. Over the past 10 years she has been treated by a Massage Therapist, Chiropractor, Naturopath, Physiotherapist, Acupuncturist, and Craniosacral Therapist. Her most regular and current therapy is provided by a Chiropractor. Upon my request, she ceased treatment from all other practitioners during the course of this study, except for 2 chiropractic adjustments – one to her lower back between treatments #3 & #4 (menstrual pain related), and one to her neck between treatments #6 & #7.

Her subjective complaints are chronic back pain (cervical, lumbar and lower thoracic regions achy, with localized stabbing pain in upper thoracic region), tight ribs (achiness reported bilaterally in anterior ribs, and in left lateral ribs), tension headaches, and sluggish digestion.

Assessment

° The following objective postural findings were obtained by postural assessment as described in *Muscles: Testing and Function with Posture and Pain, 5th ed.,* and palpation.

-moderately depressed shoulders with moderate anterior torsion bilaterally

-slightly flattened thoracic spine

-pronounced posterior protrusion of ribcage bilaterally

-moderately hyperlordotic lumbar spine

-bilateral pes planus

-moderately medially rotated femurs bilaterally

-significant fascial and muscular tension across anterior ribcage

-significant hypertonicity of thoracic and cervical erector spinae muscles

-bilateral scars from breast reduction surgery (the 'Wise Keyhole' technique – anchor scar presentation)

-scar on left lower quadrant of abdomen from mole removal

° Photographs were taken prior to treatment #1, prior to treatment #6, and post-treatment #10. The reasoning behind this form of assessment was to track visual changes to fascial lines of tension, changes to the scar tissue appearance, and monitor overall structural posture. (*See Appendix A)*

° Chest expansion was measured between full exhalation and full inhalation using a measuring tape at 3 locations, as demonstrated in *Orthopedic Physical Assessment, 5th ed. Fig. 8-27.* (See *Figure 1.0* for measurements taken at treatment #1, #6, and final assessment)

° Patient also kept a journal throughout the entire treatment period. This was used to monitor homecare compliance.

Methods

Ten treatments were given that were 90 minutes in length, between 0-3x/week, over a period of 47 days. The treatment approach used a variety of techniques such as myofascial release, lymphatic drainage, joint mobilization, passive stretching, hydrotherapy and swedish massage techniques. The overall treatment goal was to provide relief of her chronic back pain and other symptoms, by only providing direct treatment to her anterior body structures. Treatment goals were also specified each session based on the patients presenting condition and constitution.

Date	Subjective Info.	Goals	Treatment Info.	Remex.
Jan. 16/2011	- Left ribs feel tight & achy - Left side of neck is stiff -Cannot hold belly in and breathe at the same time. (causes neck mm spasm & shortness of breath)	-Introduce breast massage -Assess tissue mobility and restriction - ⇩ SNS	*Supine only – treated anterior chest, shoulders, & abdomen* -Used moist heat on scars pre-treatment -She fell asleep for the first time ever in a massage	- Consume 2-3L of drinking water daily. -"Phluffing" exercises* -Bilateral pectoralis major stretch.
Jan. 18/2011	-Didn't sleep well last night -Left ribs feel achy and stiff -2 bowel movements today	-Fascial release of lower body -⇧ peristalsis & digestive regularity - Begin specific scar treatment on breasts	*Supine only – treated anterior legs/hip flexors, abdomen, and chest* -Used moist heat on scars pre-treatment -Cold wash to abdomen	(Continue with all previously assigned homecare)

Jan. 23/2011	-Feels a 'free-ing' sensation in upper back and chest -Was constipated for 2 days post-treatment #2 -Feeling stressed today	-⇧ROM of lower ribs (approx.7-10) -⇧ fascial mobility surrounding scars - ⇩ SNS	*Side-lying & supine. (no treatment was given to the back or lateral rotators in side-lying)* - Palpated an increase in breath to the lower ribs	(Continue with all previously assigned homecare) -Hot bath with Epsom salts tonight (15 min) -A.M & P.M 'invite' 20 breaths into lateral ribcage
Jan.30/2011	- Has been feeling stressed this week -Day 6 of menstrual cycle - Had a lumbar/sacral chiropractic adjustment (one of her normal menses coping rituals)	- Lymphatic drainage - ⇩SNS	*Supine only – Lymphatic drainage techniques for neck, face, chest, and abdomen.* (She was very happy and felt calm post-treatment)	(Continue with all previously assigned homecare) -Drink a few extra glasses of water this evening for best results from lymphatic drainage

Feb.5/2011	-Feeling good today -Left side of neck is feeling a bit stiff -Is noticing an increase in side-rib movement during breathing	- ⇩ scar adhesions bilaterally - ⇩ anterior shoulder torsion bilaterally - ⇩ SNS	*Side-lying & supine. (no treatment was given to the back or lateral rotators in side-lying)*	(Continue with all previously assigned homecare) -Hot bath with Epsom salts tonight (15 min) - Pelvic floor strengthening exercises
Feb.20/2011	-Feels tension in left posterior neck -Confessed to poor homecare compliance -Walked and climbed 10 flights of stairs today	- ⇩ scar tissue adhesions - ⇩ anterior shoulder torsion bilaterally - ⇧ rib mobility/chest expansion	*Side-lying & supine. (no treatment was given to the back or lateral rotators in side-lying)* -She experienced recreation of back pain during scar treatment	(Continue with all previously assigned homecare) -Heat pack on left ribs, under anterior/lateral breast (15 min)

Feb.22/2011	-Feels tender in left lateral ribs	- ⇩ fascial restriction from scar tissue - ⇧ lymphatic circulation in breasts - ⇩ SNS	*Side-lying & supine. (no treatment was given to the back or lateral rotators in side-lying)* -Discovered that she is more comfortable in supine without pillow support under knees ** -Costal tenderness had subsided post-treatment	(Continue with all previously assigned homecare)

Feb.28/2011	-Right upper back discomfort -Feeling tired today -Has noticed a painless 'clicking' in sacrum/coccyx when going from sitting to standing	-⇧ intercostal spaces/rib mobility - ⇩fascial restrictions from scar tissue - ⇩ SNS	*Side-lying & supine. (no treatment was given to the back or lateral rotators in side-lying)* -Patient experienced significant discomfort and nausea at one point during intercostal work near her left axillary scar -Was feeling tense and guarded post-treatment	(Continue with all previously assigned homecare) -Warm shower tonight before bed (15 min)

March 1/2011	-Pain near right scapula -No discomfort in left ribs/back at all -Sad that we are almost done the treatments -High energy today	- ⇧ rib mobility/ intercostal spaces - ⇩ scar tissue adhesions - ⇩ SNS	*Side-lying & supine. (no treatment was given to the back or lateral rotators in side-lying)* -Scapular pain appeared to be a deep scar tissue adhesion connected to her right axillary scar. Release was achieved, causing her a significant increase in pain for a moment, and then it was gone.	(Continue with all previously assigned homecare)

March 3/2011	-Right neck stiff from sleeping -No back or rib pain today -Reported increased bowel regularity over past few weeks -She feels taller	- ⇩ fascial restriction from scars -⇧ rib mobility/ intercostal spaces - ⇩ SNS	*Side-lying & supine. (no treatment was given to the back or lateral rotators in side-lying)* -She felt no pain post-treatment and was very relaxed	(Continue with all recommended homecare)

- A daily journal was kept by the patient to monitor homecare compliance.

*'Phluffing' = Personal Hand Lymphatic Undulation Flow Facilitation

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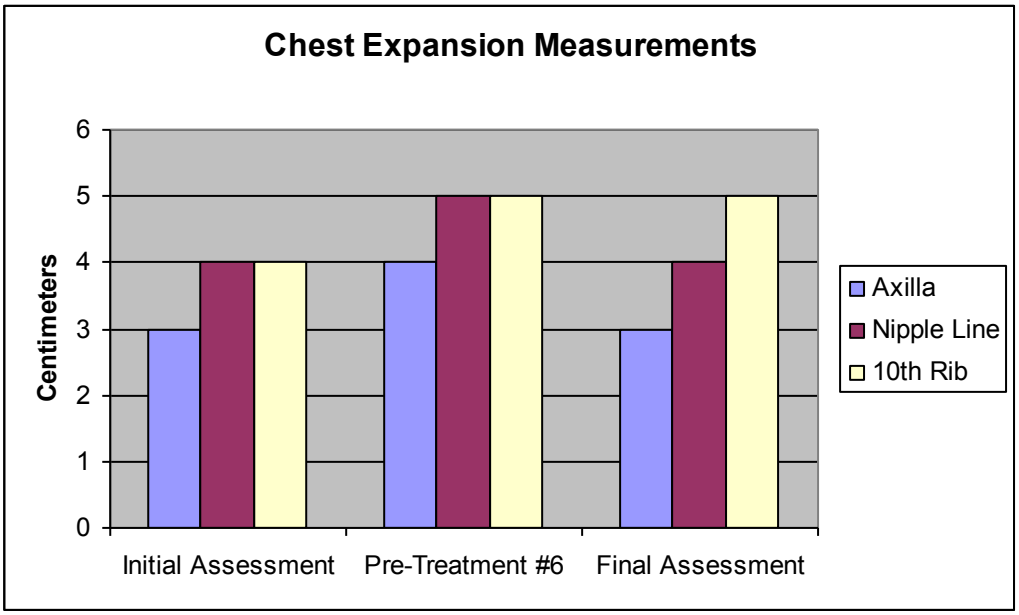
** Having a pillow under her knees caused subjective pain in her neck muscles. This may have been occurring due to the fact that placing a pillow under a patient's knees in supine brings the pelvis into a posterior tilt. Seeing as this patient relies mostly on abdominal expansion for comfortable breathing, the decreased abdominal space caused by a posterior tilt, coupled with her decreased thoracic expansion capacity, may have caused stress to her accessory muscles of respiration in this position.

Results

An objective increase in chest expansion of 1 cm was observed at all measured locations after treatment #5 (*Figure 1.0)*. Visual observations indicating decreased fascial adhesions in the costal & surgical scar regions were noted in the assessment photographs. An overall 'lengthening' of the patient's torso was also objectively observed in the photographs, as well as reported subjectively as a positive outcome by the patient. At the time of final assessment, no subjective pain was felt in the thoracic back area; cervical discomfort was still present. Patient reported an increased digestive regularity and was experiencing daily bowel movements as of the final assessment. Homecare compliance was measured to be very low (43%) based on patient's daily journal.

Figure 1.0



Conclusion

In the case of this patient's specific body presentation and health history, this course of treatment was found to be significantly effective; it was developed specifically for her body. The results of this case study may indicate that massage therapy techniques can effectively increase structural mobility, positively alter the relationship between structure and function, and potentially improve digestive function. To determine whether or not an anterior body treatment approach could have equally positive results on all patients with chronic back pain, more research would be required with a larger case study group as well as more consistently administered treatments.

Discussion

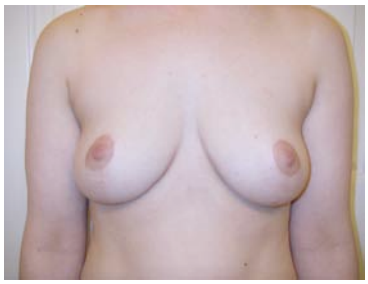
This case study was found to be an exploration of atypical approaches to treatment. When this patient was initially selected as a potential case subject, we were determined to find treatment methods that she had not yet experienced. It was significant to learn that she had never received breast treatment throughout her years of therapy, especially since she is a post-reduction patient. The decreased kyphotic curvature of her thoracic spine coupled with the posterior protrusion of her bilateral ribcage on either side of it, appeared to indicate a fascial restriction across her anterior-lateral rib cage which forced the ribs posteriorly. The fact that she has significant scar tissue in this area made it all the more indicated to be the focus of her treatments. Thankfully, she willingly consented to receiving full anterior body treatment, including work to her breasts and surgical scars.

Looking at the results of the completed treatment plan, it is interesting to note that her chest expansion measurements decreased by one centimeter in two of the measured locations between treatment #6 & the final assessment (*Figure 1.0)*. One theory as to why this occurred is that the patient's body may have responded better to the more general, superficial and lymphatic-based approach which was taken at the beginning of the study, as oppose to the more specific, deep, and scar tissue based techniques used in the later treatments. This variance in treatment approach occurred due to taking the necessary time to introduce her to breast treatment, as well as focusing on decreasing breast tissue congestion & increasing regional lymphatic drainage, prior to addressing the major adhesions in her tissues. Since the end of our 10 treatment sessions, the patient has returned to her chiropractor's regular care. At her first visit back, her chiropractor made comment that she could feel a positive change in the patient's body, and encouraged the patient to continue with this treatment plan if possible. The patient is keen to continue this treatment plan in the future, in which case, it would be indicated to continue with more superficial & lymphatic-based techniques over a longer period of time, as this treatment approach seemed to be the most suited to her body's needs.

Appendix A

Case Study Assessment Photos

Anterior View –Anatomical Position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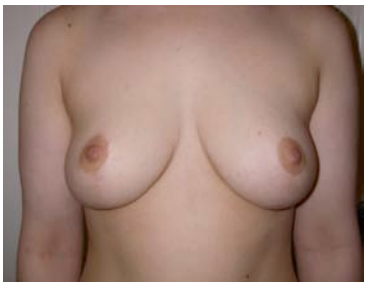
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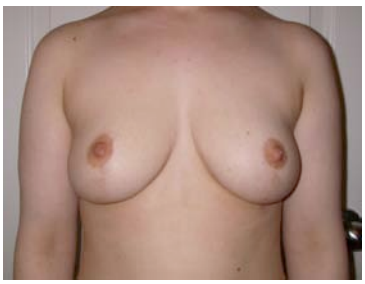
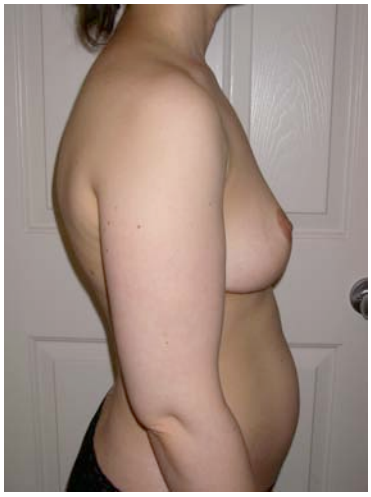

Final Assessment

Lateral View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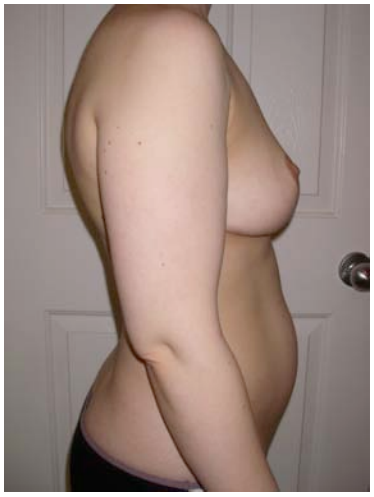
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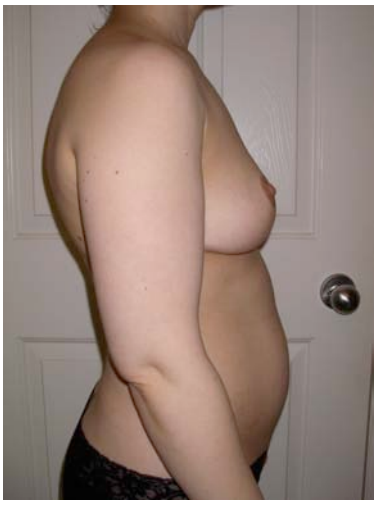
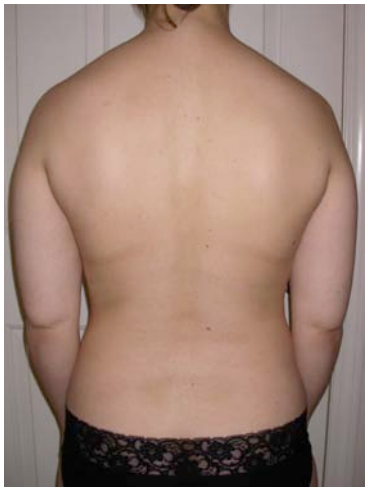

Final Assessment

Posterior View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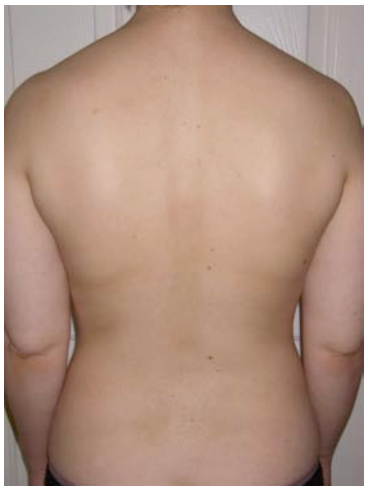
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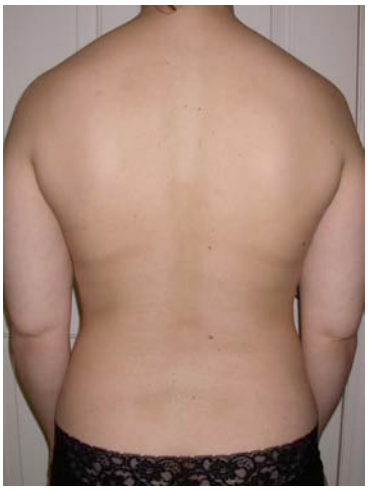
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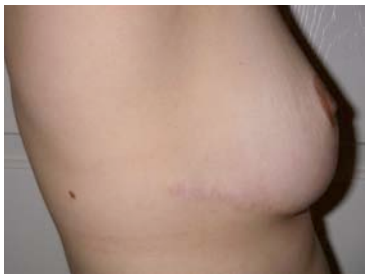
Right Axillary Scar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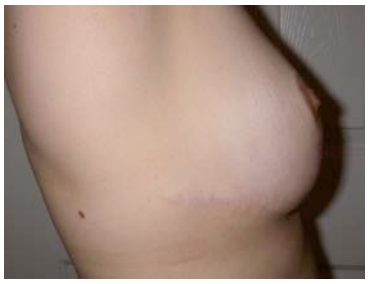
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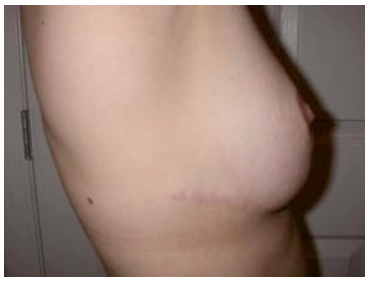
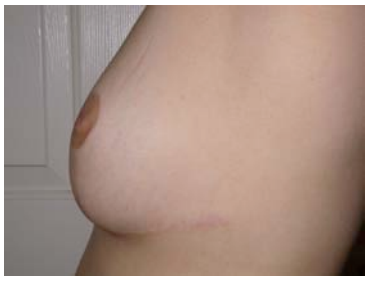

Final Assessment

Left Axillary Scar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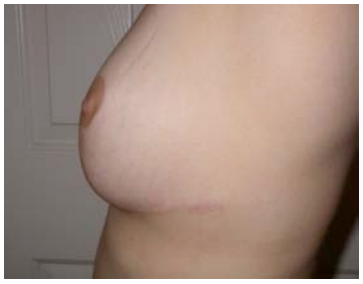
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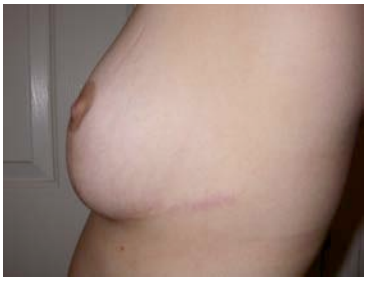
Final Assessment

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