Chiropractic Care and Rehabilitation Combined with Myofascial Release Technique After Double Mastectomy: A Case Report

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ABSTRACT

Objective: The purpose of this report is to examine the use of chiropractic care and rehabilitation combined with myofascial release to treat a patient diagnosed with breast cancer who underwent a double mastectomy to remove all cancerous lymph nodes.

Methods: A 67-year-old female presented with a chief complaint of bilateral radiating numbness and swelling into her hands after a radical double mastectomy to remove all cancerous lymph nodes. Previous chiropractic care and physical therapy had no impact on her symptoms. All shoulder range of motion was decreased at the start of treatment. A wall angel functional assessment induced pain and inability to place her arms into the 90-degree position on the wall indicating external rotator cuff and pec minor involvement bilaterally. All motor and reflex testing was within normal limits, sensation was decreased along the C6 and C7 dermatomes bilaterally.

Results: Passive myofascial release was performed on the infraspinatus and pectoralis minor muscles bilaterally along with a prone diversified chiropractic adjustment to restore motion to the cervicothoracic junction at C7-T1. An immediate increase in shoulder range of

motion was noted as well as an increase in scapulohumeral rhythm. The patient was seen once per week for 6 weeks and given stretches for the infraspinatus and pectoralis minor muscles bilaterally to be performed 3 to 5 times per day with 30 second holds.

Conclusion: The patient's symptoms decreased after one treatment, and no symptoms were reported after 4 treatments. Chiropractic care along with myofascial release can potentially improve the quality of life of a patient even after major surgery.

Key Words: Lymph Nodes, Breast Cancer, Myofascial Release, Chiropractic

BACKGROUND

When cells of the body react abnormally to external and/or internal change, they can reproduce more rapidly than normal leading to cancerous formations. This case study will focus primarily on the formation of cancerous cells within the breast tissue. Breast cancer can be identified may be identified by a small hard and nontender nodule during self-inspection or during a yearly examination given by the patient's primary medical physician. Signs and symptoms of breast cancer can include, but are not limited to, a lump, thickening of the surrounding skin, rash, dimpling of the skin, and redness or swelling of the affected area. Identification of any of these signs or symptoms should be immediately discussed with the patient's health care provider.[1-3]

It is recommended that women begin regular mammography screening beginning at age 45 unless a patient is high risk.[4,5] If self-inspection finds something of concern, a mammogram, ultrasound, or possibly magnetic resonance imaging (MRI) of the breast may be ordered.[4]

Mammogram is a low-dose x-ray of the breast used to look for presence of disease. Ultrasound or sonogram uses high-frequency sound waves to create a picture of internal organs. MRI uses magnetic field and radio waves to create a detailed picture of the organs and tissues within the body.[1,5,6] These tests may indicate something suspicious, but only a biopsy, which is the removal of tissue for examination under a microscope, can definitively diagnose breast cancer.[7]

Breast cancer is categorized into 4 stages based on the severity and progression of the disease.[5] Stage 1 is clinically non-invasive which means the cancer is isolated to the location in which it is found and is unlikely to spread to other parts of the body. Stage 2 is determined by the size of the cancer cells found; typically, the tumor will be measured between 2-5 centimeters to have this classification. Stage 3 is determined when the tumor is over 5 centimeters in size and more than 4 lymph nodes are involved. Stage 4 is classified when the cancer metastasizes beyond the breast and lymph nodes to other parts of the body.[5]

The literature is limited with information about breast cancer surgery with lymph node involvement and chiropractic care, however other research suggests that decreased range of motion of the scapula and shoulder can directly affect activities of daily living in a normally

healthy individual.[8]

CASE PRESENTATION

A 67-year-old female presented with a chief complaint of bilateral radiating numbness and swelling into her hands. She had been diagnosed with stage 2 breast cancer and underwent a radical double mastectomy to remove all cancerous lymph nodes. Previous chiropractic care and physical therapy had no impact on her symptoms. All shoulder range of motion was decreased at the start of treatment. Wall angel functional assessment showed pain and inability to place her arms into the 90-degree position indicating external rotator cuff and pec minor involvement bilaterally. The patient reported she had been under previous chiropractic care which consisted strictly of spinal adjustments and gave little to no relief causing her to seek other treatment possibilities. Physical therapy required her to wear compressive bandages to help reduce the post-surgical lymphadenopathy. She reported that this caused her a lot of discomfort and limited her already decreased ability to perform the simplest of daily living tasks. She reported taking multiple over the counter non-steroidal anti-inflammatory medications with no improvement. Her condition was hindering her ability to perform daily activities and her job performance.

The initial examination revealed all motor and reflex testing to be within normal limits, and sensation was decreased along the C6 and C7 dermatomes bilaterally. The patient's blood pressure was 135/70 and pulse was 65. Decreased active shoulder range of motion was observed bilaterally. This was confirmed by a positive O'Donoghue test, which reproduced pain during resisted range of motion (ROM). Passive range of motion was within normal limits for all shoulder motion and no pain or discomfort was reported, decreasing the possibility of ligamentous damage. Resisted range of motion causing pain indicated that the causative factor was muscular. Soft tissue palpation revealed hypertonicity in both the infraspinatus and pectoralis minor muscles bilaterally.

Myofascial release technique, a manual therapy used to relax hypertonic musculature by stripping the muscle belly from origin to insertion while passively moving the affected joint through its proper range of motion, was performed on the infraspinatus and pectoralis minor muscles bilaterally. A prone diversified chiropractic adjustment was performed on the cervicothoracic junction at C7-T1 to restore motion to the spine. The patient demonstrated an immediate increase in shoulder range of motion and reported a relief in tension throughout the upper body. She was given home stretches to be performed 5 times per day for 30 second holds to assist with the healing process, with hopes of further increasing shoulder range of motion over time. She was treated once per week for 6 weeks before a reevaluation was performed. Her symptoms diminished from daily to weekly occurrence over the first 2 weeks of treatment, and at the time of reevaluation she reported no symptoms.

Figure 1 shows the bandage treatment prescribed by the physical therapist. **Figures 2 and 3** show the prescribed stretches for the infraspinatus and pectoralis minor, respectively.

Figure 1

Figure 2

Figure 3

CONCLUSION

While breast cancer is prevalent and well researched in many areas, this case offers a unique perspective as a chiropractic physician was an integral part of the rehabilitative efforts. Using myofascial release technique of hypertonic muscles, chiropractic adjustive therapies, and rehabilitative exercises on a patient with a history of double mastectomy and postsurgical lymphedema opens the door for further research into the potential benefits of chiropractic care in relieving symptoms caused by serious illness.

LIMITATIONS

This case report is limited in scope and double mastectomy combined with bilateral numbness in both hands is not a common clinical presentation.

CONSENT

Written consent for publication was obtained from the patient.

COMPETING INTERESTS

The authors declare that they have no competing interests.

REFERENCES

1. Morrell RM, Halyard MY, Schild SE, Ali MS, Gunderson LL, Pockaj BA. Breast cancer-related lymphedema. *Mayo Clin Proc*. 2005;80(11):1480-1484. doi:10.4065/80.11.1480
2. Anderson, L, Hojris, I, Erlandesen, M, Andersen, J. Treatment of Breast-Cancer-related Lymphedema with or without lymphatic drainage: A randomized study. *Acta Oncologica*. 2009;39(3), 399-405.
3. Fourie, WJ, Robb, KA, (2009). Physiotherapy management of axillary web syndrome following breast cancer treatment: Discussing the use of soft tissue techniques. *Physiotherapy*. 2009;(95), 314-320.
4. McKenzie, DC, Kalda, AL. Effect of Upper Extremity Exercise on Secondary Lymphedema in Breast Cancer Patients: A Pilot Study. *Journal of Clinical Oncology*. 2003;(21), 463-466.
5. Stubblefield MD, Custodio CM. Upper-extremity pain disorders in breast cancer. *Arch Phys Med Rehabil*. 2006;87(3 Suppl 1):S96-S101. doi:10.1016/j.apmr.2005.12.017
6. Alcantara J, Alcantara JD, Alcantara J. The chiropractic care of patients with cancer: a systematic review of the literature. *Integr Cancer Ther*. 2012;11(4):304-312. doi:10.1177/1534735411403309

7. https://www.youngsurvival.org/uploads/pdf/educational-materials/BreastHealthAndYou-2016_FINAL.pdf
8. Kanga, I, Steiman, I. Chiropractic management of a patient with breast cancer metastases to the brain and spine: A case report. *JCCA*. 2015;59(3), 269-278.