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## **New focus on managing painful dysfunction following treatment for Breast Cancer.**

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### **Abstract.**

**Background:** Treatment for breast cancer often leads to compromised connective tissue, under recognized as a source of painful musculoskeletal problems. Literature commonly reports painful syndromes. If left untreated, this vicious cycle of pain and dysfunction could ultimately end in biopsychosocial disintegration. Physiotherapists, doctors and patients should be aware of the musculoskeletal implications of treatment, making early and focused therapy important for regaining function and quality of life.

This paper shares observations in one practice, as well as dissection observations relating to the dysfunction. Three problems will be discussed. The Axillary Web Syndrome (AWS), impaired shoulder function, and headaches of cervicogenic origin.

**Methods:** Patients with painful syndromes were evaluated to find possible anatomical reasons for the dysfunction. To understand and explain the patterns, Anatomical and Surgical texts were compared to the insight gained from dissection studies of the connective tissue and fascial systems in the area.

**Results:** In textbooks, only descriptions of systems, regional anatomy, or operative procedures were found. In dissections intact connective tissue systems could be studied for interrelationships. Matching connective tissue observations with surgical procedures identified several possible contributors to observed dysfunction.

**Discussion:** Damage by surgery and radiotherapy to various anatomical structures and on several levels could be identified as contributors to dysfunction.

1. Damage within the superficial fascia and the deep fasciae covering muscles.
2. Adhesions between structures essential for freedom of movement.
3. Fibrosis of myofascia resulting in loss of extensibility.

In AWS, damage to lymphatics embedded within the connective tissue of the axilla and around the neurovascular bundles create tightness seen as tight bands in the distribution of lymphatic vessels of the upper quarter. Limited shoulder movement is due to scarring and fibrosis in various sites within the dermis, superficial and deep fascia and muscles. The relationships of the platysma muscle to the suspensory ligaments of the breast and chest wall create postural tension and changed head posture when damaged, often resulting in cervicogenic headaches.

**Conclusions:** Understanding of connective tissue and anatomical interrelationships in painful dysfunction guides one through more appropriate and specific treatment modifications.