

Axillary Web Syndrome after Sentinel Node Biopsy

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Key Words

Axillary web syndrome · Axillary surgery ·
Sentinel node biopsy

Summary

Background: Axillary web syndrome (AWS) is a self-limiting cause of morbidity in the early postoperative period after axillary surgery, but it is encountered also after sentinel lymph node biopsy. The syndrome is characterized by cords of subcutaneous tissue extending from the axilla into the medial arm. **Case Report:** Here, we report a patient presenting with AWS several weeks after sentinel lymph node biopsy. **Conclusion:** AWS has been reported to be resolved spontaneously in all patients 8–16 weeks after axillary surgery, and shoulder movements improve in this period. There is no definitive treatment modality for AWS. Patients should be reassured and informed that this condition will improve even without treatment.

Introduction

Sentinel lymph node biopsy (SLNB) has become an accepted alternative to axillary dissection in early-stage breast cancer for patients with a clinically negative axilla [1]. This technique provides accurate staging with fewer complications compared to axillary dissection, and is now widely used [2]. The axillary web syndrome (AWS) is a self-limiting and frequently overlooked cause of significant morbidity for patients in the early postoperative period after axillary surgery [3]. Here, we report a case of AWS presenting several weeks after SLNB.

Schlüsselwörter

Axillary Web Syndrome · Achselhöhlenchirurgie ·
Sentinel-Node-Biopsie

Zusammenfassung

Hintergrund: Das sogenannte Axillary Web Syndrome (AWS) ist eine selbstbegrenzende Erkrankung in der frühen postoperativen Periode nach Achselhöhlenchirurgie bzw. nach Sentinel-Node-Biopsie. Das Syndrom zeichnet sich durch eine subkutane Strangbildung von der Axilla bis in den mittleren Armbereich aus. **Fallbericht:** Wir berichten über eine Patientin, die einige Wochen nach einer Sentinel-Node-Biopsie ein AWS entwickelte. **Schlussfolgerung:** Berichten zufolge bildet sich AWS bei allen Patienten 8–16 Wochen nach Achselhöhlenchirurgie spontan zurück, und Schulterbeweglichkeit verbessert sich in dieser Periode. Es gibt keine definitive Behandlungsmodalität für AWS. Den betroffenen Patienten sollte versichert werden, dass sich ihr Zustand auch ohne Behandlung bessern wird.

Case Report

The patient was a 43-year-old female patient whose screening mammography showed grouped and pleomorphic microcalcifications in the upper lateral quadrant of the left breast and who underwent radioguided occult lesion localization (ROLL). Pathologic examination of excisional biopsy material revealed ductal carcinoma in situ with tumor-positive surgical margins. Skin-sparing mastectomy and SLNB were performed after obtaining the patient's informed consent. Although autologous tissue options were offered to the patient, immediate reconstruction with silicone implants was performed according to the patient's preference. Pathological examination revealed 2 sentinel lymph nodes which were negative for metastasis. Approximately 8 weeks after surgery, the patient presented

with a several-week history of pain and reduced range of motion in the ipsilateral arm, and palpable subcutaneous fibrotic bands extending from the anterior axillary line to the medial surface of the arm (fig. 1). In the 10th postoperative week, the patient was no longer complaining about pain or limited mobility of her left arm. In the physical examination, the fibrous bands had completely disappeared, and there was no functional impairment of the arm or axilla. All findings were thought to be related to AWS.

Conclusion

AWS was first reported by Moskowitz et al. [4]. Stasis, thrombosis, and fibrosis as a result of surgical trauma to the lymphatics and veins located in the superficial fascial system of the proximal arm and axilla are the supposed pathological mechanisms leading to AWS. Pathological examination of the resulting fibrotic bands show sclerosed veins and lymphatics with surrounding fibrosis [4]. In 74% of patients with AWS, pain and limited shoulder abduction are seen. In these patients, subcutaneous nodule formation in the related axilla may also be observed [5]. The incidence of AWS depends on the type of surgical procedure carried out in the axilla. Moskowitz et al. [4] observed AWS in 6% of patients who underwent axillary dissection, although this was a retrospective study. Leidenius et al. [6] reported in their prospective study that they observed this condition in 20% of patients who underwent axillary SLNB. In their study, they also showed that AWS is less commonly seen after SLNB compared to axillary dissection. AWS has been reported to resolve spontaneously in all patients 8–16 weeks after axillary surgery, and shoulder movements improve in this period [4]. AWS seen after SLNB



Fig. 1. Axillary web syndrome after sentinel lymph node biopsy.

improves faster than that seen after axillary dissection. In our patient, AWS improved spontaneously within 2 weeks. Subcutaneous nodules which may be seen in AWS should be considered in the differential diagnosis as subcutaneous metastasis of the disease [5]. There is no definitive treatment modality for AWS. Patients should be reassured and informed that this condition will improve even without treatment. Patients should be encouraged to continue exercising. Non-steroidal anti-inflammatory drugs (NSAIDs) or opioids can be used for pain management. Surgical release of the fibrotic bands or injection of local anesthetics should not be attempted since these measures might increase the risk of lymphedema [3].

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