

# AN AXILLARY ARCH OF DEDECTED DURING AXILLARY DISSECTION

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#### AKSILLER DISEKSIYONDA SAPTANAN BIR AKSILLER ARK OLGUSU

#### ÖZET

İnvaziv meme kanserinde evrelemede aksiller lenf nodunun durumu en önemli prognostik faktördür [1]. Aksiller evreleme için hastanın aksillası klinik olarak negatif ise öncelikle sentinel lenf nodu çalışması yapılmalıdır. Aksiller lenf nodu diseksiyonu klinik olarak aksillada palpe edilebilen lenf nodu olan veya sentinel lenf nodunda metastaz olan hastalarda evreleme için kullanılan en önemli yöntemdir. Aksiller diseksiyonun eksiksiz ve komplikasyona yol açmayacak şekilde yapılması çok önemlidir. Diseksiyon sırasında komplikasyonlardan kaçınabilmek için aksilladaki anatomik yapılar eksiksiz ortaya konulmalı ve olabilecek anatomik varyasyonlar tespit edilebilmelidir. Aksiller ark ya da aksillopektoral kas bu anatomik varyasyonlardan en önemlisidir [2]. Aksiller ark anatomi kitaplarında %7 olarak bildirilmesine karşın aksiller diseksiyon sırasında sadece %0.25 oranında ortaya konulabilmektedir [3]. Bu yazıda amacımız, aksiller diseksiyon sırasında ortaya koyduğumuz çok ender görülen aksiller ark olgusu eşliğinde aksiller diseksiyon yapılmasının önemine bir kez daha dikkat çekmektir.

Anahtar sözcükler: aksiller diseksiyon, anatomik varyasyon, aksiller ark

## ABSTRACT

The status of axillary lymh node is the most important prognostic factor for staging of invasive breast cancer (1). Axillary lymph node dissection is the most important staging method in patients with clinically positive lymph node metastases or with histologically proven sentinel lymph node metastases. It is very important that axillary dissection should be performed adequately and without complications. To avoid complications during axillary dissection, anatomical structures should be exposed completely and anatomical variations must be recognized. Axillary arch or axillopectoral muscle is the most important anatomical variation (2). The rate of exposing the axillary arch during axillary dissection is % 0,25. However, anatomy textbooks report this rate as %7 (3). By this case, our aim was to present breast cancer cases with axillary arch, and to attract attention to the importance of performing axillary dissection adequately in those patients.

Key words: axillary dissection, anatomic variation, axillary arch

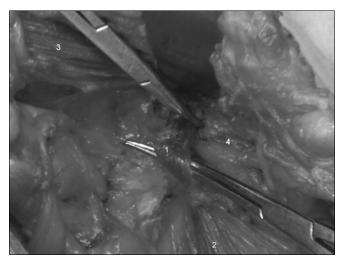
## Case

A 83 years old woman who has a palpable mass on her left breast was admitted to our clinic. Breast examination revealed that she had a palpable axillary lymph node, and a 4 cm palpable mass and nipple distortion on her left breast. Her self-history and family history was unremarkable. The right breast and axilla were normal. On mammography and ultrasound there was a malignant appearing mass located at retroareolar region that had an irregular border, and spicular extensions. The histological examination of the tru-cut biopsy from the mass proved that she had an invasive breast cancer. Because the mass was located at retroareolar region, and she had a palpable axillary lymph node and requested mastectomy, she underwent modified radical mastectomy. During the axillary dissection we recognized that latissimus dorsi muscle was extending upward as an arch over the axillary vein and had a nearly 1-1.5 cm thickness. With a careful examination we also observed that the tendon of latissimus dorsi muscle was extending under the axillary vein. On the other hand, gross palpable lymph nodes with 1x1 cm size were visible over and around the arch and the axillary vein. Axillary arch was clearly exposed, lymph nodes located over axillary arch and axillary vein were excised, and axillary dissection was completed without any complication.

## Discussion

The status of axillary lymph node is the most important prognostic factor for staging of invasive breast cancer (1). Axillary staging should be done for every patient who has invasive breast cancer. The status of axillary lymph node could be evaluated via lymphatic mapping and sentinel lymph node biopsy in clinically axillary negative patients. While small axillary lymph node metastases may be overlooked by imaging methods (4), axillary lymph node dissection should be performed in patients with palpable lymph nodes or with proven metastatic lymph nodes after sentinel lymph node biopsy. The rate of missing metastatic lymph nodes in the axilla by random sampling or level I axillary dissection is %25. For an adequate staging a level I-II axillary dissection is the generally approved approach. Anotomical structures should be exposed, and possible anatomical variations

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**Şekil 1.** Axillary arc (nearly 1-1.5 cm wideness) is seen leaving from latissumus dorsi muscle. Muscle fasciculation ends reaching out pectoralis major muscle. Numbers which show the structures at the picture; (1-Axillary arc 2-Latissumus dorsi muscle 3-Pectoralis major muscle 4-Axillary vein)



**Şekil 2.** Axillary arc and axillary lymph nodes which extend over the axillary arc and superiomedial of axillary arca re seen. Numbers which show the structers at the picture; (1-axillary arc 2-Latissumus dorsi muscle 3-Pectorlais mojor muscle 4-Lymph nodes 5-Axillary vein)

must be recognised in the axilla for an appropriate axillary dissection. In the axilla the most common muscular variation is the axillary arch (2). The rate of exposing axillary arch during axillary dissection is %0,25 (3). However, in anatomy textbooks it is reported as %7. The arch which has a 7-10 cm length, and a 0.5-1,5 cm width branches from the latissimus dorsi muscle and ends in the facia of corachobrachialis muscle or in the pectoralis major or biceps brachialis muscle (5). Axillary arch is not only a formal variation, but at the same time it has of clinical importance. It has also been reported that axillary arch can be detected by magnetic resonance imaging (6). Axillary arch can cause axillary

vein occlusion, and thoracic outlet syndrome (7-8). During the axillary dissection axillary arch can cause to result in the injury of axillary artery, axillary vein or plexus brachialis (9-10-11). Axillary arch could also lead to inadequate axillary dissection and thus to increased axillary reccurence. As a result it causes to increased mortality and inaccurate staging that might lead to inedaquate adjuvant treatment. In the current case presentation we tried to emphasise the importance of axillary dissection in a patient with an axillary arch, an anatomic variation that can lead to very important complications during the axillary dissection and inadequate staging.

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