

Case Report

Extended Chest Wall Resection for Aggressive Fibromatosis of Breast. Reconstruction with Mesh Graft and TRAM Flap

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OPEN ACCESS**Keywords**

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Abstract

Desmoid tumours in the chest are rare borderline tumours. The primary treatment of a tumour is the radical surgical resection. We present the case of a 23-year-old woman who had surgical resection by right breast tumor. The CT examination showed infiltration of sternum margin and some ribs. We resected the tumour together with a half of the right breast and performed the partial resection of the sternum and four ribs. We reconstructed the chest wall by artificial mesh graft and right TRAM flap.

The patient did not receive oncological treatment. 6 years after the surgical treatment the patient is symptoms and recurrence free.

ABBREVIATIONS

TRAM: Transverse Rectus Abdominis Myocutaneous

CASE PRESENTATION

We present the case of a 23-year-old woman who had surgical resection by right breast tumour, after fine needle aspiration cytology and mammography examinations. The pathological report showed aggressive fibromatosis of the breast. Half a year later we detected a local recurrence of the tumour. At this time the CT examination showed infiltration of the sternum margin and four ribs (Figure 1). The tumour expanded during her second pregnancy (Figure 2). We were able to perform the final surgical treatment two and a half years after the detection of the local recurrence of the tumour (Figure 3). The operation strategy was planned with the cooperation of a plastic surgeon. The chest wall affected by the tumour is shown in (Figure 4) [1,2].

The tumour was resected together with a half of the right breast. The partial resection of the sternum and four ribs was performed. In order to supplement the chest wall, a mesh graft was implanted and the soft tissue was recovered by a TRAM flap (Figure 5). Intraoperative pathological examination ensured that the resection margin was tumour free. We reconstructed the chest wall by artificial mesh graft and right TRAM flap (Figure 6). The histological report showed that the tumor consisted of

cytologically bland spindle cells entrapping lobules, ducts and nerves and infiltrating skeletal muscle fibers of the major pectoral muscle. The tumor cells were immunoreactive for smooth muscle actin and were negative for cytokeratins (AE1/AE3, 34Beta-E12), p63, desmin, CD34, S100. The proliferation rate as assessed by the Ki-67 labeling index was <1%. This phenotype is in keeping with the diagnosis of fibromatosis. (No Beta-catenin staining was available at the time of diagnosis) (Figure 7) [3-6]. The patient recovered without any complications (Figure 8). During the



Figure 1 CT image before the operation.



Figure 2 Photo of the patient before the operation.



Figure 3 The plastic surgical plan of the operation.

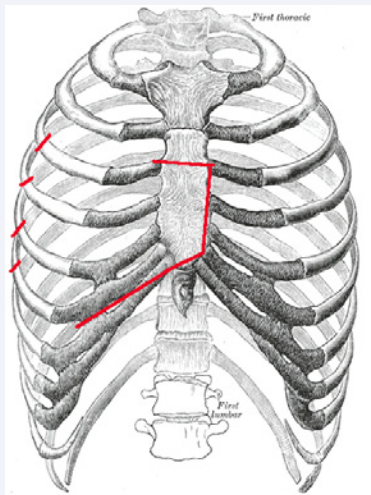


Figure 4 The chest wall area affected by the tumour.

follow-up no recurrence was detected (Figure 9). 6 years after the operation the patient's 4th child was born.

DISCUSSION

Fibromatosis is rare among primary breast tumours. This is a non-malignant disease of the breast [7,8]. After successful surgical treatment the local recurrence is up to 25% of the cases. At an advanced stage fibromatosis can infiltrate the chest wall.

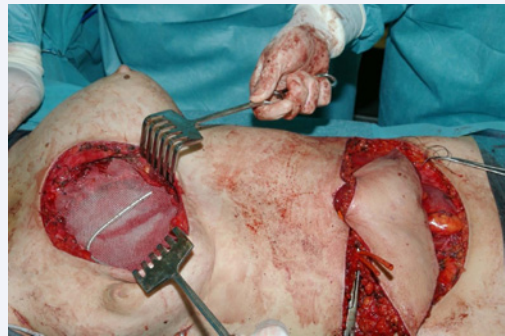


Figure 5 Reconstruction of the chest wall by mesh graft.



Figure 6 Photo of the patient after surgery.

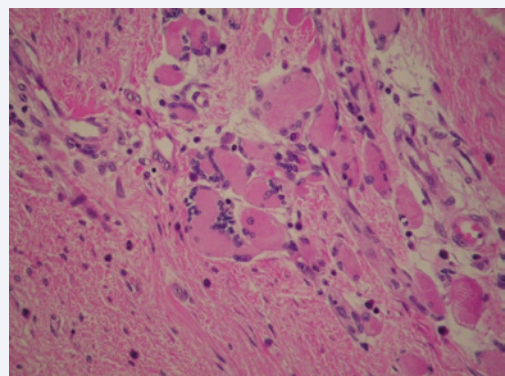


Figure 7 Histological image of the tumour /haematoxylin and eosin x400/.



Figure 8 Photo of the patient 4 weeks after the operation.

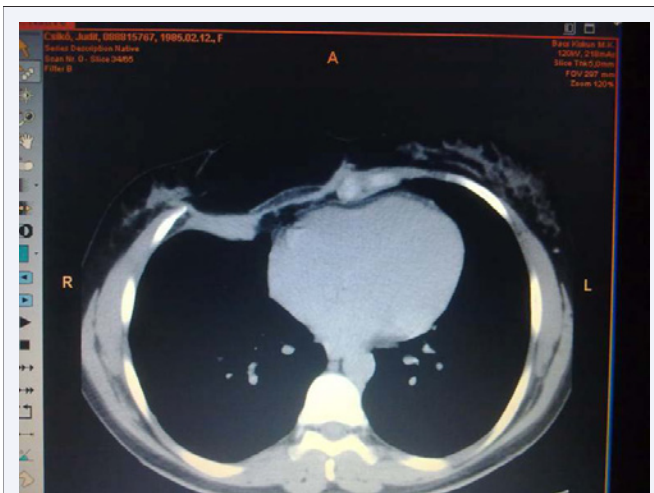


Figure 9 CT image of the chest 4 years after the operation.

In neglected cases, the resection of the soft tissue and the chest wall can be a big challenge. After the RO resection plastic surgical methods are often necessary for the reconstruction [9]. Usually no oncological treatment is necessary after the operation [10]. Close follow-up of the patient and optional repeated operation can be a way of treatment.

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