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Abrikossoff's tumor mimicking endometrial tumor – literature review and case report of the first described granular cell tumor in scar tissue after caesarean section

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Summary

Abrikossoff's tumor (AT) is a rare, predominantly benign, asymptomatic, solitary, less than three cm-in-size tumor with usually favorable prognosis after surgical excision. Most of the tumors are found in the head and neck location in the third to fifth decade of life. Local wide excision, which is a treatment of choice, is curative in most of the cases.The case of 34-year-old female patient the authors report herein is the first described AT located in scar tissue after caesarean section. Physical and ultrasound examinations revealed a well-circumscribed, two-cm-in-size mass located in the fascia level. With a preoperative suspicion of endometrial tumor, the patient underwent surgery. Tumor was excised with wide tissue margin. Postoperative pathologic analysis revealed the presence of granular cell myoblastoma and was essential giving definitive diagnosis.

Key words: Abrikossoff's tumor; Granular cell tumor; Scar tissue.

Introduction

The Abrikossoff's tumor (AT) is a granular cell rhabdomyoma or myoblastoma, described first by Aleksiei Abrikossoff in 1926 [1]. AT is the neoplasm of putative Schwann cell origin, although its histological provenience is still controversial [2-4]. ATs are rare, predominantly benign, asymptomatic, solitary, less than three-cm-in-size tumors, occurring most frequently in skin and subcutaneous tissue, especially in the head and neck location [2, 5-7]. ATs occur mostly in the third to fifth decades of life, but childhood cases are described as well [5-7]. The treatment of choice is surgical excision, due to risk of malignancy. The margin of adjacent tissue need to be excised because of poorly defined margins of ATs. Prognosis after surgical excision is usually favorable [5-7]. The case the authors report herein is the first AT affecting scar tissue.

Case Report

A case of 34-year-old female patient suffering from tumor located in a postoperative scar after caesarean section. Physical examination revealed a slightly painful two-cm-in-size mass. Ultrasound examination did not show any pathology in the abdomen except well-circumscribed tumor located in the fascia level. With a preoperative suspicion of endometrial tumor the patient underwent surgery. Tumor was removed with wide tissue margin, including 10x5 cm of fascia (external oblique aponeurosis and rectus sheath), as well as margin of rectus abdominis and oblique muscles. The abdominal wall was repaired with polypropylene mesh.

Microscopic examination on hematoxylin and eosin (H&E) stained sections revealed sharply defined tumor (Figure1). The tumor cells were large with conspicuous eosinophilic granular cytoplasm (Figures 2-4).

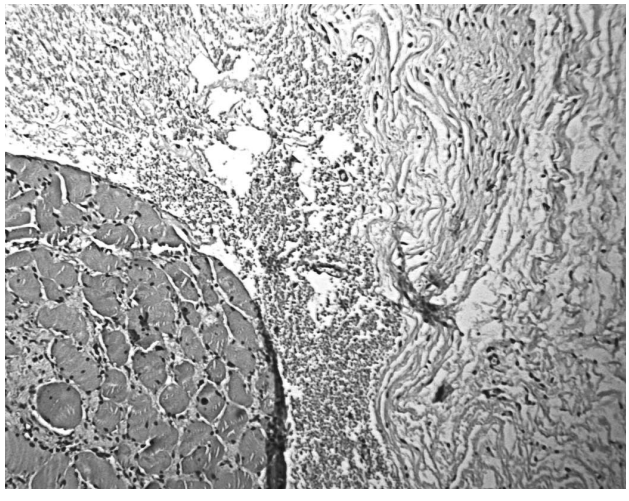

Figure 1. — Abrikossoff tumour with large, granular cells (left) and surrounding miocytes (right) separated by hematoma (H&E stained microscopic examination).

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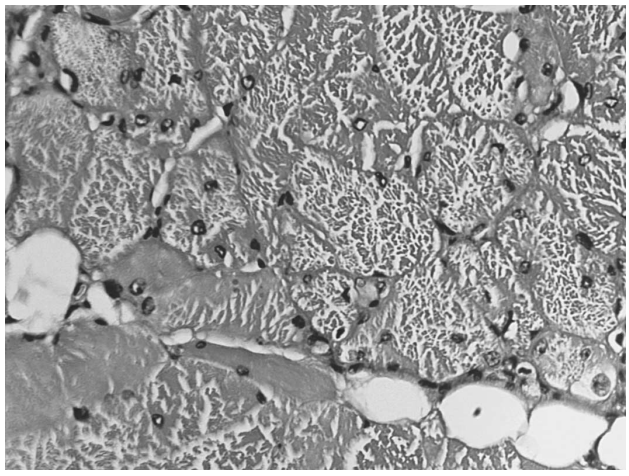

Figure 2. — H&E stained sections under light microscopy showing large cells with characteristic granular cytoplasm.

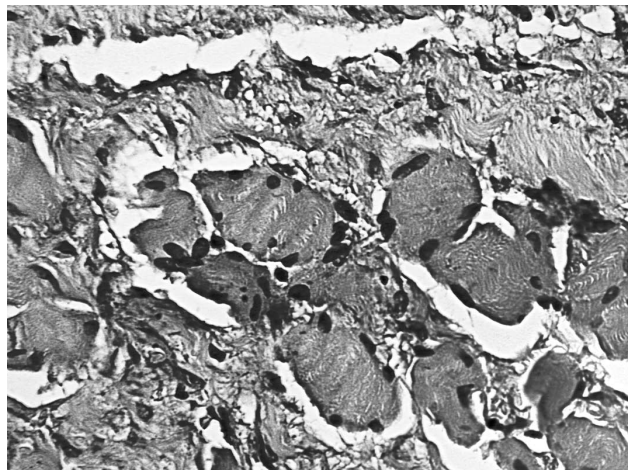

Figure 3. — H&E stained sections under light microscopy showing large cells with characteristic granular cytoplasm.

Discussion

AT is a rare (0.019 – 0.03% of all tumors), mostly benign tumor. However 1-3% of malignant cases with typical recurrence and metastases were also described and potential malignant transformation should be considered during follow-up as well [5, 6, 8].

Most of the ATs are found in the head and neck region, especially arising in the oral cavity, affecting the tongue [7, 9]. Nevertheless, ATs may occur in any anatomical region. With the variety of localizations, ATs can clinically and radiologically mimic renal [12], thyroid [2], vulvar [3,13], airway [4], biliary tract [14] benign and malignant tumors, primary breast carcinoma, and can be found in routine breast screening program [10, 11]. Tumor location in scar tissue has not yet been reported. The caesarean scar mass suggests endometrial tumor, that was considered in preoperative differential diagnosis in this case. Postoperative pathologic analysis was essential and gave definitive diagnosis.

Local wide excision, which is a treatment of choice, is curative in most of the cases. Multicentric location should be excluded before treatment planning, since there is up to 25% reported cases of multiple lesions. In the cases of malignancy a wide excision is required. If there is any evidences of tumor in the surgical margin, a wider excision is indicated. Chemotherapy and radiation are not effective for malignant cases and are not needed for benign lesions [5, 6, 8, 13]. In the presently described case the surgical wide excision seems to be curative. Patient has been followed-up for three months and she remains in good health with no sign of tumor recurrence.

Although microscopic aspects are usually specific, the AT (especially in shallow biopsy cases) may be mistaken for a malignant one. Immunohistochemical evidences should support microscopic examination [5].

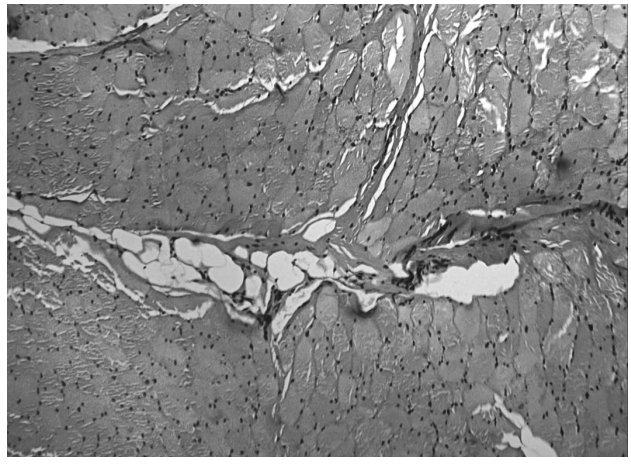

Figure 4. — H&E stained sections under light microscopy showing large cells with characteristic granular cytoplasm.

Conclusion

Although AT is relatively uncommon neoplasm, it should always be included as a possibility in the differential diagnosis even in uncommon locations. The malignancy should always be considered. Preoperative imaging has poor specificity. Wide surgical excision is a treatment of choice. Microscopic examination supported by immunohistochemical evidences is essential for definitive diagnosis.

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