



## TREATMENT OF SOFT TISSUE SARCOMA IN THE EARLY POST-PARTUM PERIOD USING AUTOVENOPLASTY (CASE REPORT)

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### Abstract

The article describes a malignant tumor - synovial sarcoma. The tumor was localized on the medial surface of the right thigh and was detected during pregnancy. The authors provide literature data on the clinical manifestations of this disease, features of morphological diagnosis and treatment tactics. The described observation focuses on the difficulties of diagnosis, preoperative preparation and surgical technique.

### Relevance:

The successes achieved in the treatment of a number of oncological diseases, the young age of some patients, a good prognosis for long life in some diseases, as well as various side effects of antitumor treatment have raised a number of questions for oncologists and doctors of other specialties about improving the quality of life of women faced with oncology.

Sarcomas are a rare and heterogeneous group of malignant tumors of mesenchymal origin that account for less than 1% of all malignancies in adults and approximately





10% of cancers in children [1–4]. Approximately 80% of new cases of sarcomas arise from soft tissues and the rest from bones [1]. According to the Madras Metropolitan Tumor Registry (India), bone and soft tissue sarcomas account for 1.1% and 1.2% of all cancers in women and 0.9% and 1.1% of all cancers in men, respectively. [6]. Soft tissue sarcomas invade adjacent blood vessels in 5% of cases [7]. Previously, amputation was considered the treatment of choice for sarcomas of the pelvis and extremities that surrounded and invaded large vessels [7]. Fortner et al [8] changed the approach to the treatment of such complex cases and reported the very first series of single-block resections for sarcomas invading vascular structures. This method has been found to be oncologically safe and provides satisfactory local control [9–10]. Patients with soft tissue sarcoma of the extremities (STS) or osteosarcoma with vascular invasion require multimodal treatment to achieve limb salvage. Limb salvage surgery significantly improves functional outcome and quality of life compared with amputation, even in patients with distant metastases [5]. Among soft tissue sarcomas (STS), synovial sarcoma (SS) accounts for 4–10% and, together with malignant fibrous histiocytoma (28%), liposarcoma (15%) and leiomyosarcoma, rhabdomyosarcoma (12%) forms the group of the most common SMTs among the adult population [eleven]. In terms of incidence among children, SS is second only to rhabdomyosarcoma [12, 13].

Most often, SS occurs in young and mature patients (15–35 years), with a slight predominance in men [14–16]. The localization of SS in the soft tissues of the extremities reaches 80%; to a lesser extent, these tumors are found in the head and neck, torso, and retroperitoneal space [17–19]. The location of the SS in the joint area is no more than 5% [18]. Observations of SS in the mediastinum, peripheral nerves, and skin are not uncommon [20, 21, 22]. Intraosseous localization of this malignant neoplasm is also possible [23, 24]. The term “synovial sarcoma” first appeared in the work of the German physician G. Simon in 1895 when describing a case of tumor disease of the knee joint in a mature man. 15 years later, F. Lejars and H. Rubens-Duval (1910) gave a detailed description of this sarcoma [25]. In 1944 S.D. Haagenson, A.R. Stout, having conducted a thorough analysis of 104 observations and formulated diagnostic criteria, presented synovial sarcoma as an independent clinical and morphological form [26]. And finally, in 1947, AFIP (Armed Forces Institute of Pathology) published a report on 33 cases of SS, which provided a detailed clinical and morphological description of the tumor using radiological diagnostic methods and morpho-radiological comparisons [25]. In 2021, 420 cases of soft tissue sarcomas were identified for the first time in Uzbekistan. In addition, in the Republic there is a slight increase in both morbidity and mortality from tumors





of the musculoskeletal system. The incidence rate was 1.2 per 100 thousand population. Locally advanced soft tissue sarcomas of the extremities often involve great vessels in the tumor infiltrate [27].

**Key words:** Synovial sarcoma, autovenoanastomosis.

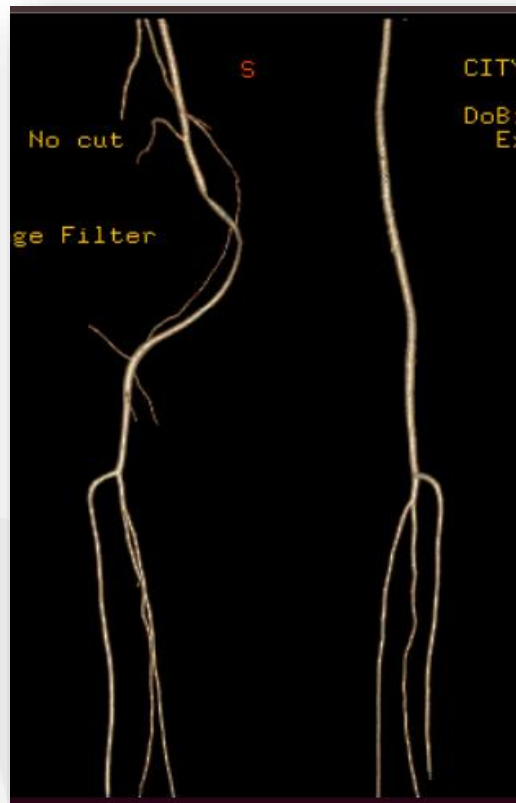
**Target.** Show the results of treatment of soft tissue sarcoma of the thigh in the lactation period using autovenoplasty.

### Material and Methods

In the conditions of the department of the musculoskeletal system of the RSNPMCOIR of the Ministry of Health of the Republic of Uzbekistan in the period from 2018 to 2022. 338 patients with soft tissue sarcomas were treated. Of these, 214 (63.3%) were admitted with a primary tumor, 124 (36.7%) were admitted with a recurrent tumor. Of the 338 patients, 41 (12.1%) underwent various types of reconstructive plastic surgery with limb preservation. Of these, 10 (3%) were performed as mutilation operations. Over the past 5 years, a similar case has been identified in our practice for the first time: Recurrence of soft tissue sarcoma during pregnancy was noted for the first time. We present a rare case of synovial sarcoma in patient M., 23 years old. From his medical history, he considers himself sick since 2020. She does not connect her illness with anything, heredity is not burdened. After the patient first developed a mass in her right thigh, she contacted the Fergana branch of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology. 02/17/2020 The patient underwent a biopsy of the formation. Histology No. 1518 - 24 - Synovial sarcoma G-II. Next, the patient received 7 courses of irregular chemotherapy according to the SAR regimen. 01/05/2021 Taking into account the growth of the tumor, surgical treatment was performed to the extent of: Removal of a soft tissue tumor of the right hip. The patient refused further treatment. In December 2022, I registered with a gynecologist at my place of residence, where I underwent a comprehensive examination and found no evidence of recurrence of cancer. Then, at a period of 6 months, a formation appeared in the area of the postoperative scar of the right thigh; examinations were performed and a recurrence of the tumor was revealed. The patient was offered termination of pregnancy by artificial abortion due to recurrence of the tumor disease and an increase in the dynamics of tumor growth. But the patient refused treatment and gave birth in May 2023. Currently, due to an increase in the size of the tumor, the patient was sent to the Republican Specialized Scientific



and Practical Medical Center of Oncology and Radiology. When examined on the area of the inner-posterior surface of the right thigh, a soft tissue tumor measuring 30.0x20.0 cm, with unclear boundaries, dense elastic consistency, practically limited in movements, is determined. The tumor is painful on palpation, the pain intensifies with movement. Peripheral lymph nodes are not enlarged.



**Pic. 1** During angiography Description protocol:

Scanning phases: native, arterial, venous and 3 minutes after intravenous administration of contrast agent. In the soft tissues of the posteromedial sections of the distal part of the right femoral region, a cystic-solid formation is determined, with total dimensions of 176x162x235 mm (antero-posterior x diameter x height), density +26+42 HU., closely adjacent to the femoral artery and its branches. The density of the formation in the arterial phase is +25+54 HU., in the venous phase +30+60 HU. In the thickness of the formation, the femoral artery is contrasted, its proximal branches are contrasted along the contour of the formation.

The formation compresses and displaces the popliteal artery. The cortical layer of the posterior contours of the distal diaphysis of the right femur is thickened due to the layered periosteal reaction. The surrounding soft tissues are swollen. The



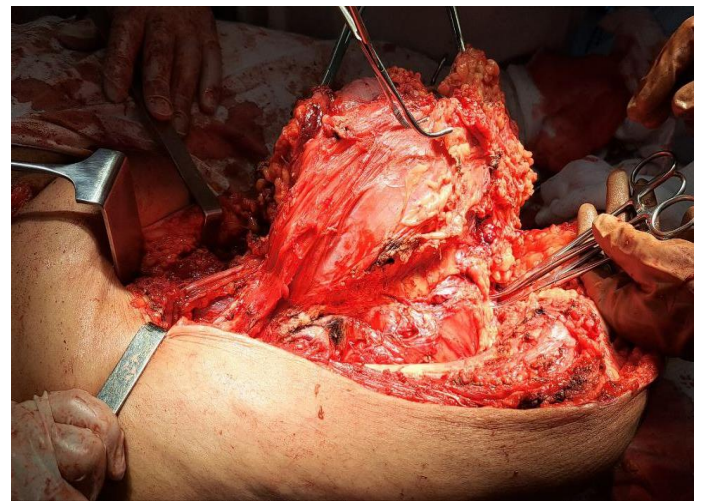


articular surface of the distal epiphysis of the femur is smooth. The walls of the main arteries are smooth, clear, and the lumen is homogeneous. The lumen of the main arteries can be traced throughout, without areas of occlusion or local protrusion of the walls. In the venous phase, the density of the formation did not change. The formation somewhat compresses and pushes the popliteal vein posteriorly.

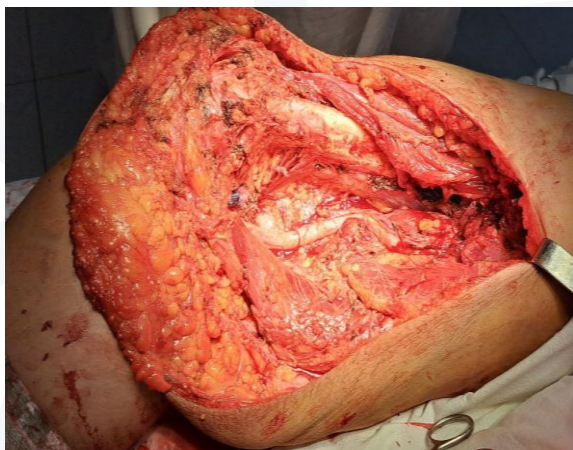
The patient underwent surgery to the following extent: Excision of a recurrent tumor with autovenoplasty on July 29, 2023.



a.



b.



c.

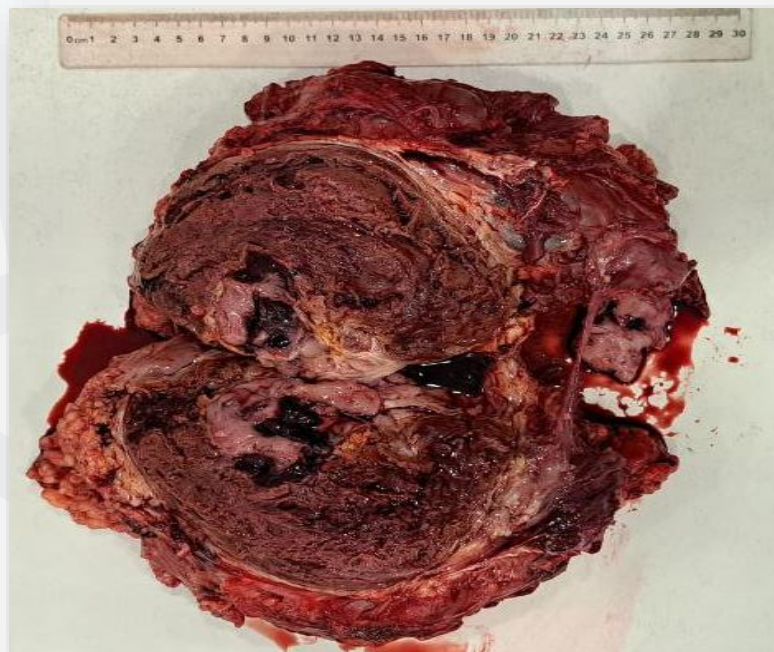


d.



e.

Pic. 2.a. Right lower limb with a tumor located on the medial surface. b. Single block tumor mobilization stage. With. Postoperative defect of the femoral artery was 20 cm.d. The stage of applying distal autovenoanastomosis. e. View of the stage of restoration of the femoral artery defect by autovenous anastomosis from the great saphenous vein.



**Pic. 3.** Macro specimen: a soft tissue tumor of a soft elastic consistency, 25x30 cm in size, embedded in healthy tissue, when cut there are brown-red spots of erosion, several foci containing an expanded substance, macroscopically in terms of appearance, a myxosarcomatous sign was determined, and this material was sent for histological examination.





## CONCLUSION

The further increase in cancer incidence rates and the older age of pregnant women dictates the need to find and improve methods for the early detection of malignant neoplasms at the stage of their possible cure. A woman's consent to terminate a pregnancy creates the opportunity to carry out all diagnostic techniques and a combined cancer treatment program. The choice of treatment for rare combinations of malignant tumors during prolongation of pregnancy requires the accumulation of experience and further research.

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