

Soft Tissue Sarcoma at the Site of an Old Injection-Induced Abscess

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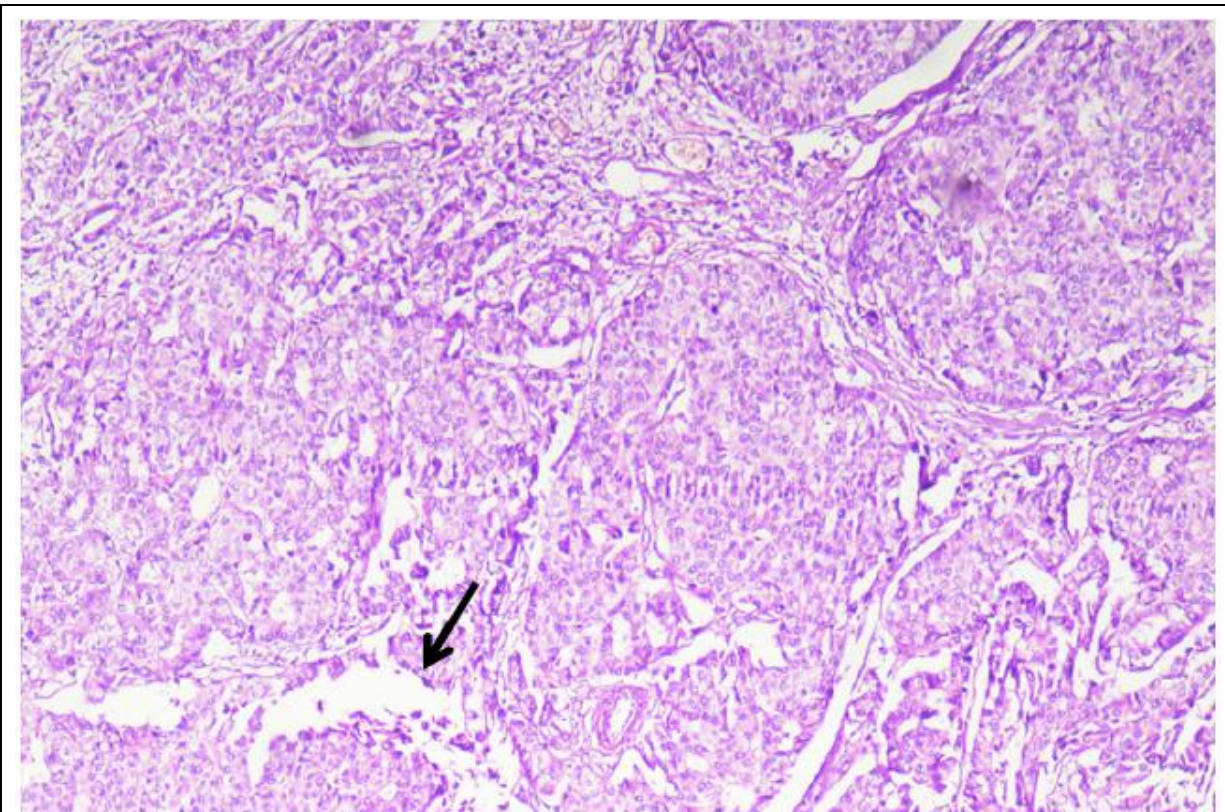


Figure 1: Amorphous glands shown by black arrow.

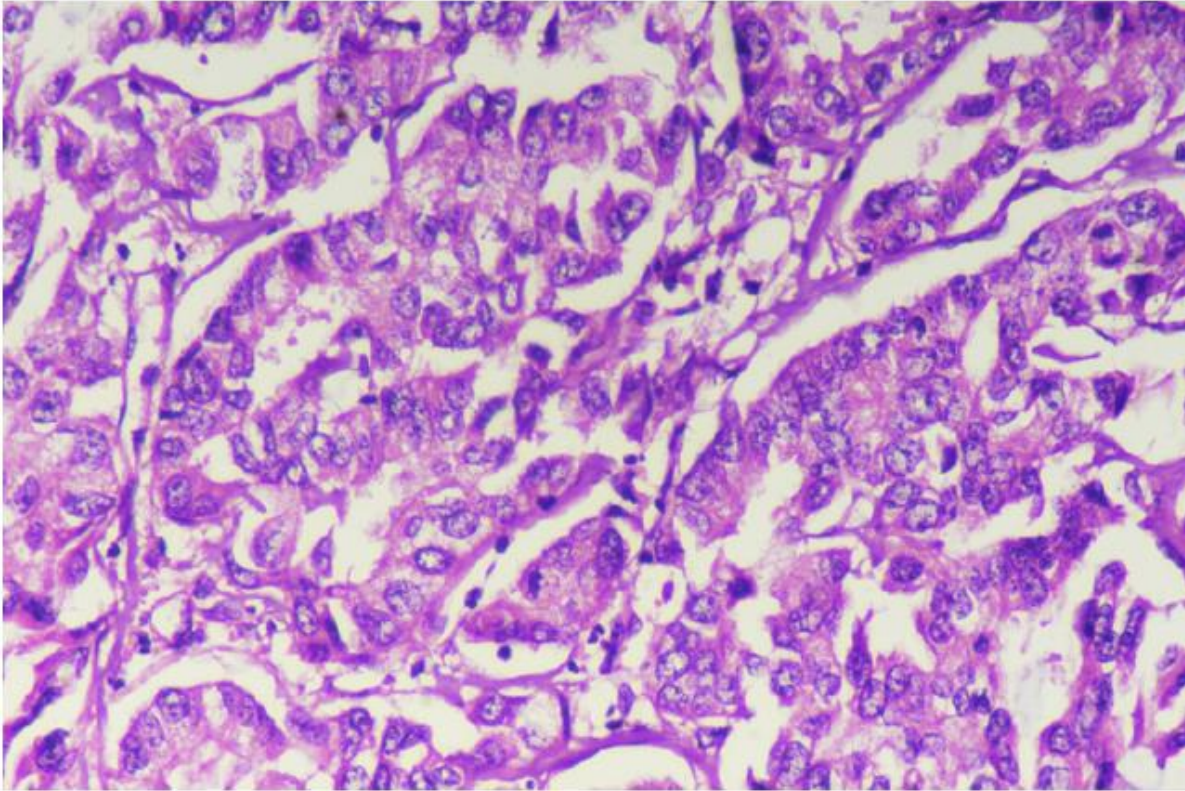


Figure 2: Glands lined by highly pleomorphic hyperchromatic cuboidal to columnar cells.

Keywords: Sarcoma; Spindle cell neoplasm; Glands; Injection

Clinical Image

Introduction and Background

Sarcomas are rare malignant neoplasms. They arise in tissues of mesenchymal origin. According to the World Health Organization, 80% of sarcomas arise from soft tissues, and the rest arise from the bone. In most cases of soft tissue sarcomas, the etiological factors remain unknown; however, many predisposing and associated factors have been established. These include genetic predispositions and mutations, chemotherapy, exposure to radiation, carcinogenic chemicals and viruses, and chronic irritation. Although injection-site sarcomas have been well-studied in animal models, no case of injection-site sarcoma has been reported in humans to the best of our knowledge. We report a case of injection-site soft tissue sarcoma with unique histology in a young male patient.

Case:

A 25-year-old male was presented with the complaint of having a painful mass in the upper outer quadrant of his right gluteal region. He did not have any other complaints. His past history was unremarkable except for history of an injection-site abscess 2 years ago. According to the patient, he developed pain and temperature 3 days after an injection at the same site 2 years ago. The patient could recall neither the name of the injection nor the reason for which the injection was administered. He was successfully treated with a surgical procedure (most likely incision and drainage) and medications.

According to the patient, he discovered the mass four months ago, which has been slowly growing and was now associated with dull pain. The surgical department ordered fine needle aspiration cytology (FNAC), which revealed findings consistent with malignant spindle cell neoplasm. Subsequently, an incisional biopsy sample was taken. On microscope examination, the sections revealed malignant neoplasm composed of sheets of spindle-shaped cells against a myxoid background. Foci of gland formation were lined by amphophilic cells with prominent nucleoli floating in the mucin pools (figure 1). The images (figure 1 and figure 2) show epithelioid to spindle-shaped cells against a myxoid background which is the typical histopathology of sarcomas. Differential diagnosis includes clear cell sarcoma, glandular nerve sheath tumor, and synovial sarcoma. Immunohistochemistry was advised to differentiate the tumor further. Unfortunately, the patient was lost to follow-up despite multiple attempts to connect with him.

Discussion and Conclusions

Two observations make this case unique and interesting. Firstly, the presence of amphophilic glands is an unexpected finding in soft tissue sarcomas biopsy samples. Secondly, the development of a sarcomatous mass at the site of an old injection-induced abscess raises the question of whether there is any cause-effect relationship. In cats and dogs, injection site sarcomas have been well-established [1,2]. However, to the best of our knowledge, no such cases have been reported in humans before. Chronic irritation and trauma may induce an inflammatory response that may lead to the development of sarcomas. Further studies are needed to determine whether injections and injection site abscesses play a role in sarcomagenesis.

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