Retroperitoneal Liposarcoma: an Autopsy Case*

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**ABSTRACT**

Liposarcoma is very rare mesenchymal tumor that occurs in deep soft tissue and mostly seen in limbs and retroperitoneum, accounts for 24\% of extremity and 45\% of retroperitoneal soft tissue sarcomas. Retroperitoneal liposarcomas are typically present with advanced disease and often carry a poor prognosis. Retroperitoneal liposarcomas grow slowly in the very expandable retroperitoneal space in the deeply hidden and clinically silent therefore diagnosis is usually made late. Liposarcomas have five histological subtypes; well-differentiated liposarcoma (WDLS), dedifferentiated liposarcoma (DDLS), pleomorphic, myxoid and round cell liposarcoma. Our case is 81-year-old male who was found dead in the village homeless shelter. This was classified as a suspicious death and transferred to our service for autopsy. The external examination revealed rectal prolapse, abdominal distension and scrotal swelling. The internal autopsy showed green membrane on the peritoneum, brown smelly contents in the abdominal space, a perforation area 1.5x1 cm in size that in the first part of the duodenum and the dimension of tumor was 48x30x6 cm in the retroperitoneal space. The pathological report was dedifferentiated liposarcoma. We present a rare case of a dedifferentiated retroperitoneal liposarcoma with duodenal ulcer perforation.

**Keywords:** retroperitoneal liposarcoma, autopsy, death

**INTRODUCTION**

Liposarcomas are very rarely seen malignant tumors frequently involving extremities, and retroperitoneal space. The most prevalent subtype of soft tissue sarcomas is liposarcoma, and 24\% of them originate from extremities, and 45\% of them from retroperitoneal soft tissue (1). Retroperitoneal liposarcomas grow gradually, and extend into retroperitoneal space. It is usually detected in its advanced form. It has a worse prognosis (2). Five histological subtypes of liposarcomas include well-differentiated liposarcoma, dedifferentiated liposarcoma, pleomorphic, myxoid, and round-cell myxomas (1). Our aim was to discuss a case of giant retroperitoneal liposarcoma in the light of the forensic medicine literature.
CASE REPORT

Our case was a 81-year-old men who was found dead in a village residence. Attorney general evaluated the case as suspicious death, and sent the corpse to our center for autopsy. On autopsy, external examination revealed that he was 165 cm tall weighing 65 kg. Rectal prolapsus, abdominal distension, and scrotal swelling were detected. On internal examination, brown-colored foul – smelling intraabdominal fluid collection, green-colored peritoneal membranes, perforated ulceration of the first part of the duodenum (Figure 1), and a retroperitoneal tumoral mass measuring 48x30x6 cm (Figure 2) contiguous with gastric wall, surrounding pancreas, spleen, and left kidney with patchy areas of lipomatous, and gray-brown bright myxoid areas was detected. On histopathological examination diagnosis of dedifferentiated liposarcoma was made. Besides, toxicologic urinary, and hematological analyses could not detect any substance. Peritonitis developed secondary to duodenal ulcer perforation was reported as the cause of his death.

DISCUSSION

Liposarcomas are very rarely seen malignant tumors frequently involving extremities, and retroperitoneal space. Liposarcomas are the most frequently (41%) encountered retroperitoneal soft tissue sarcomas, followed by leiomyosarcoma (27%), malignant fibrous histiocytoma (7%), fibrosarcoma (6%), and malignant peritoneal neurinoma (3%). Histological type of the tumor is very important in the course of the disease. Well-differentiated, dedifferentiated, and pleomorphic sarcomas have a higher risk of metastasis, while myxoid, and round-cell liposarcomas are low-grade tumors with a slow clinical progression (1). In 15-20% of the cases, dedifferentiated liposarcomas can metastasize into lungs, liver, and bony tissues with a mortality rate of 28-30 percent (4). Our case was diagnosed as dedifferentiated liposarcoma. Any histopathological abnormality was not detected in other internal organs. Dedifferentiated tumors have two phases as well-differentiated liposarcomas, and non-adipose liposarcomas with nearly equal incidences in both genders. They become apparent more frequently during 7. decade of one’s life. (5). Generally, 10 % of differentiated liposarcomas transform into dedifferentiated tumors (6). Predisposition of retroperitoneal lesions to become dedifferentiated tumors is related to their sizes, and duration of these lesions rather than their locations (5). Since well-differentiated liposarcomas reach to giant dimensions before they are diagnosed, they have a higher prevalence of dedifferentiated (5). Since retroperitoneal liposarcomas grew gradually, and hardly symptomatic (2,5), they are usually giant masses at the time of diagnosis (2). Especially, retroperitoneal liposarcomas are incidentally diagnosed (5). Our case was also incidentally diagnosed during postmortem examination. Retroperitoneal liposarcomas generally manifest clinical features of abdominal masses impinging on adjacent anatomical structures (3) or symptoms of painless abdominal masses (5). Apart from these symptoms, neurological symptoms involving lower extremities, pain (3), fever, weight loss, anorexia, genitourinary symptoms, and intestinal obstruction are seen (7). Since our patient was living alone in a village residence, any information about his disease couldn’t be obtained from his family members. However in our case rectal prolapsus, and scrotal swelling because of increased abdominal pressure were seen. Wanchick et al. reported about a patient with complaints of rectal bleeding, nausea, abdominal distension, weight loss, and a retroperitoneal mass invaded into terminal ileum, and induced lower gastrointestinal bleeding as
an outcome of laparotomy (2). The cause of death of our case was reported as peritonitis developed secondary to perforated duodenal ulcer. However, on necroptic examination, any direct correlation between retroperitoneal mass, and duodenal ulcer could not be detected. Diagnosis of retroperitoneal sarcomas is made by radiological methods such as computed-tomography (CT), and magnetic resonance imaging (MRI). Its primary treatment modality is surgery (1-5). The physician who performs the autopsy should not forget that histological type of the tumor has an important impact on the mortality rates, and they should also define location, and histological type of the tumor at the time of diagnosis. They should keep in mind, that these tumors can be a direct or indirect cause of death.

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