Texas ACP Abstract Competition Clinical Vignette

A Rare Case Report of a Testicular Germ-Cell Tumor (GCT) Metastasis Mimicking Pancreatic Malignancy

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Introduction: Testicular germ cell tumors (TGCT), evenly divided into two histologic types, seminomas and nonseminomas, are the most common malignancy among males between ages 15 to 44 years [1, 2]. The incidence of TGCT in the U.S. has increased over the past 20 years, being attributed to chronic exposure environmental risk factors (i.e. pesticides and plastic component polyvinyl chloride) in addition to genetic predisposition [1, 3-6].

Description: We report of an unusual case of retroperitoneal metastatic GCT clinically simulating a pancreatic lymphoma. A 31-year-old male presented with a 2-month history of abdominal pain in the right upper quadrant, 40-pound weight loss, nausea, episodes of emesis and decreased appetite. Abdominal computed tomography scan showed a large heterogenous mass measuring 11 x 8 cm in close proximity to the head and body of the pancreas. This tumor encased portions of the celiac trunk, superior mesenteric artery, splenic, superior mesenteric and portal veins. Additional solid masses measuring 8.2 cm and 10 x 8.8 cm were noted inferior to porta hepatis and medial to the left kidney, respectively. Given the tumor distribution, patient was suspected of having pancreatic lymphoma and underwent endoscopic ultrasound-guided tissue sampling of the tumor. Microscopic examination of the biopsy revealed solid nests of infiltrative malignant epitheloid cells characterized by nuclear pleomorphisms and hyperchromatic nuclei with focal necrotic and apoptotic debris. Immunohistochemical stains revealed positive pancytokeratin and SALL4, a transcription factor specific for embryonic cell pluripotency and an immunohistochemical marker for TGCT [7]. Laboratory tests revealed elevated serum levels of alpha fetoprotein (AFP = 57.8 ng/ml; reference: 10-20 ng/ml), lactate dehydrogenase (LDH = 2919 units/L; reference:106-242 units/L) and beta human chronic gonadotrophin (β-hCG =1458 IU/L; reference: 0-3 IU/L). Both microscopic and laboratory findings are consistent with metastatic retroperitoneal GCT. Subsequent clinical history and physical exam of the patient revealed a right testicular solid mass measuring 13.3 x 7.8 x 10.7 cm. Patient was aware of this progressively enlarging right testicular mass for the past 5-years, but had not undergone previous evaluation. Patient's family history is negative for TGCT and denied undergoing orchiopexy for cryptorchidism during his childhood. Patient has been working in a plastic manufacturing company with exposure to endocrine disrupting chemicals, a potential exogenous risk factor for his TGCT [5].

Conclusion: Final diagnosis was "Stage IIIA-Testicular GCT-Low-risk" based on the primary and metastatic sites involvement and serum tumor marker levels. The patient underwent radical orchiectomy of the right testicle followed by 4 cycles of chemotherapy with etoposide/cisplatin/bleomycin for the remaining retroperitoneal tumors. The five-year progression-free and overall survival rate for our patient are 89% and 92%, respectively [1]. This case highlights an unusual presentation of retroperitoneal GCT metastasis and the need to include the

following differentials of lymphoma, sarcoma, and GCT for retroperitoneal masses with lymphadenopathy.
Word Count: 450
Word Limit: 450

References:

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