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SIADH and Stauffer Syndrome in a Patient with Renal cell carcinoma Coinciding with Liposarcoma

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Non- Metastatic Nephrogenic Hepatic Dysfunction(Stauffer Syndrome) and SIADH in a patient with Renal Cell Carcinoma Coinciding with Liposarcoma

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Introduction

- We present a rare case of Stauffer syndrome (SS) that was encountered. SS manifests with many types of cancers including Renal Cell Carcinoma (RCC).
- a 76-year-old male with a history of a left nephrectomy due to RCC and left thigh mass came to the hospital complaining of diarrhea.

Case

- Now we would like to present a 76-year-old male with a history of prostate cancer, a left nephrectomy due to RCC, a left thigh mass, and other medical conditions who came to the hospital due to diminished oral intake and persistent diarrhea.
- On admission, he had hyponatremia with a sodium of 129 and elevated liver function tests with alkaline phosphatase of 240 and AST of 52.
- Previous workup of the hyponatremia revealed elevated urine osmolality that did not respond to IV fluid administration, which was consistent with SIADH (Syndrome of Inappropriate Anti Diuretic Hormone).
- A PET Scan was previously done and showed a mass on his left thigh and an MRI showed a 12.2 cm mass deep in the sartorius muscle. Labs prior to surgery were as follows: 10.8 WBC, 7.8 Hb, 344 PLT, 129 Na, 825 ALK, and 65 AST. The patient did not have jaundice during this time nor scleral icterus but had gradually worsening anemia, persistent hyponatremia due to SIADH, and persistently elevated alkaline phosphatase and AST.
- The patient's AST started to increase just before the renal cell carcinoma was discovered. After the patient's nephrectomy, the alkaline phosphatase started to increase, and the alkaline phosphatase and the AST remained elevated until a brief time of about two months after nephrectomy. The AST remained elevated and spiked right after the liposarcoma resection but both sodium and LFTs normalized 6 weeks later.

Discussion

- Stauffer syndrome is commonly a non-metastatic nephrogenic hepatic dysfunction syndrome that is linked to the effects invoked by paraneoplastic tumors (6). Stauffer syndrome remains a rare occurrence that is yet to be completely unraveled. It can occur in renal cell carcinoma, but other malignancies have appeared associated with this syndrome (7).
- Few studies have demonstrated the role of IL-6 in this syndrome. A study by Bhangoo et al shows that cholestasis secondary to Stauffer syndrome could be related to the pro-inflammatory activity of IL-6 cytokines (8). These effects were reversible when steroids were used in one prior case in the literature or when surgery removed the tumors such as in our case [4]. These interventions seemed to be the most effective way of reversing the SIADH and hepatic syndrome. We hypothesize that during the liposarcoma tumor resection of our patient, there was a transient surge of interleukin 6 and other pro inflammatory cytokines that led to the severe spike in alkaline phosphatase and AST after the procedure. This case emphasizes a unique and difficult clinical setting in which a patient simultaneously presented with clear cell renal cell carcinoma (RCC) and liposarcoma, highlighting the need to take multiple diagnoses into account in patients with complicated medical histories.
- It also demonstrates the diagnostic difficulties in determining the Liposarcoma's etiology in connection to the earlier RCC, demanding thorough diagnostic methods. In our patient with Stauffer's syndrome, he also had SIADH which was felt to be also caused by an IL-6 mechanism as well. The prevailing thought is that increased IL-6 produced by paraneoplastic tumors causes SIADH by binding both soluble and insoluble IL-6R which then activates transcription cascades that result in the release of vasopressin and affect the transporter gene production in hepatic biliary cells resulting in elevations in hepatic enzymes [2,3].
- Additionally, the patient's SIADH with hepatic syndrome, a variant of Stauffer syndrome, without liver metastases, highlights the need to detect paraneoplastic syndromes as critical diagnostic signals in cancer patients [9]. The fluctuating nature of lab results during the patient's illness, such as hyponatremia and elevated platelet count, alkaline phosphatase, and AST levels emphasizes the need for careful monitoring to guide therapy and evaluate treatment effectiveness. This case ultimately serves as a reminder of the significance of long-term patient care, follow-up, and possibly future therapy or interventions even after discharge, particularly in situations involving concurrent malignancies and related disorders [10].

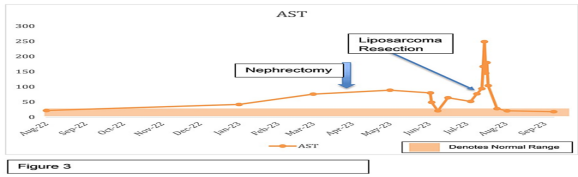
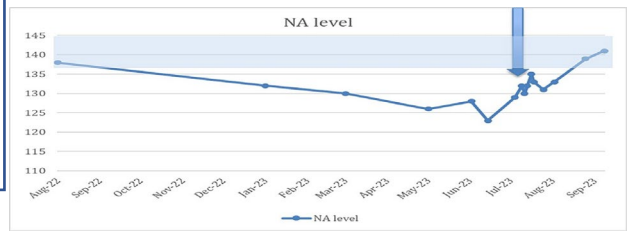
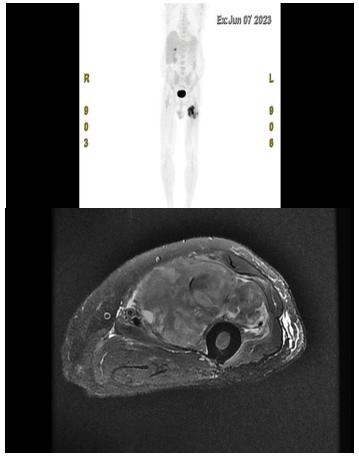


Figure 3





Conclusion

- Medical professionals must have Stauffer's syndrome on their diagnostic radar when dealing with cases of unexplained cholestatic liver disease or other odd hepatic illnesses in the setting of paraneoplastic tumors.
- Stauffer's syndrome along with unexplained SIADH can act as warning signs, informing medical professionals that a patient's body may be hiding a tumor that has not been found or explains the presence of certain lab abnormalities.
- liver function abnormalities that do not neatly correspond with usual patterns of liver disease, it is important to consider Stauffer's syndrome.

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