An Unusual Case of a Renal Colic Mimic - Wunderlich Syndrome

A 30-year-old woman, known case of hypertension, presented with sudden, progressively worsening left flank pain and vomiting for two days. On presentation, the patient was tachycardic with a soft but tender abdomen, showing left flank guarding and fullness, while the rest of the systemic exam was unremarkable. Initial labs showed severe anemia (Hb 6.5 g/dL) requiring transfusion, with normal tumor markers and organ function tests. Ultrasound showed a well-defined solid-cystic mass (5.6 x 8.2 cm) in the left adnexal region extending to the lumbosacral area, with minimal free fluid in the abdomen and pelvis. Computed tomography (CT) abdomen and pelvis revealed a large (11 x 11 x 20 cm), exophytic, heterogeneously enhancing mass in the left peri-nephric space, arising from the lower pole of the left kidney [Figure 1]. Due to persistent flank pain, ongoing anemia despite transfusions, and increased oxygen demand, elective exploratory laparotomy with left nephrectomy and en bloc tumor resection was performed after pre-operative hemoglobin optimization. Intra-operatively, highly vascular retroperitoneal mass arising from lower pole of the left kidney was found compressing the hilum and ureter along with gonadal vessels. On histology, mass was found to be consisting of muscle-like spindle cells, fat tissue, and abnormal thick-walled blood vessels that lack a normal elastic layer consistent with angiomyolipoma (AML) [Figure 2]. Patient recovered uneventfully and was discharged. She remains well on follow-up.

Wunderlich syndrome, characterized by spontaneous renal hemorrhage, is a rare condition with an incidence that varies based on its underlying cause. Renal AML, one of the most common causes, has a rupture incidence ranging from 0.07% to 0.3% in the general population, rising to amongst 1–3% in patients undergoing long-term dialysis.[1] Although rare, Wunderlich syndrome can be life-threatening due to hemorrhagic shock, acute kidney injury, and recurrent bleeding, making early diagnosis and intervention critical.

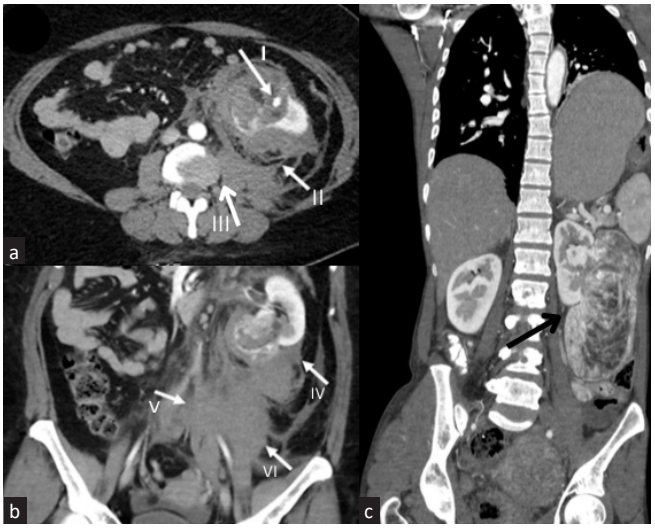

Figure 1: Contrast-enhanced computed tomography of abdomen & pelvis: (a) Pelvicalyceal system involvement (I-arrow), peri-lesional fat stranding and thickening of peri-renal fasciae (II-arrow) (Gerota's, Zukercandle, and lateral conall along with disruption of renal cortex & medially extending into left psoas muscle with blurred fat planes at places (III-arrow). (b) Hypo-enhancing mixed-density collection, extending to the peri-pancreatic, peri-gastric, and peri-splenic regions (IV-arrow), reaching the right para-colic gutter while crossing the midline, along with displacement of the aorta and common iliac vessels (V-arrow) and insinuating the pelvic sidewall structures (VI-arrow). (c) Coronal section showing exophytic, heterogeneously enhancing lesion (black arrow) arising from the lower pole of the left kidney involving pre-vertebral and pre-sacral space extending from the 1" lumber vertebra till the 3 sacral vertebra.

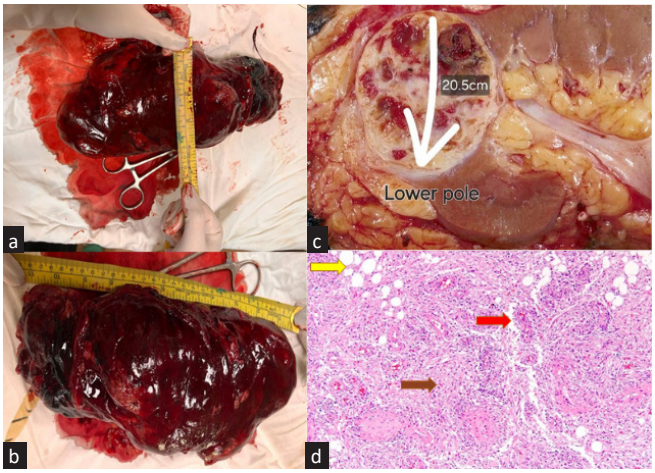

Figure 2: (a - b) Post-resected tumor - 20x15 cm highly vascular, retroperitoneal mass (c) Gross-pathology: Non-encapsulated retroperitoneal mass white arrow in picture (c) (20 x 11 x 7.5 cm) with hemorrhagic (vascular component), gray-white (smooth muscle component) and yellow (adipose component) on cut surface. (d) Microscopically, tri-phasic tumor with myoid spindle cells (brown arrow), mature adipose tissue (yellow arrow) and dysmorphic thick-walled blood vessels without elastic lamina (red arrow) were seen.

Conflicts of interest: There are no conflicts of interest.

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