Case 10997

A tropical tale of chyluria and complications due to sclerosants
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Section: Uroradiology & genital male imaging
Area of Interest: Urinary Tract / Bladder Special Focus: Tropical diseases Case Type: Clinical Cases
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Patient: 42 years, male

Clinical History:

Patient was treated in an outside hospital with endoscopic silver nitrate instillation for complaints of chyluria. One day later, he started having acute left loin pain, tenderness and pallor. He was referred to our center for further management.

Imaging Findings:

Plain CT abdomen: Enlarged left renal silhouette with branching calcific linear density within the calyceal system and parenchyma suggestive of argyrosis of the urinary tract (fig:1)

CECT abdomen: Heterogeneously enhancing, enlarged left renal parenchyma with fixity to left psoas muscle and a large pseudo-aneurysm at left renal pelvis. (fig:2-a, b).

Discussion:

Chyluria results due to fistulous communications between intrarenal lymphatic vessels and urinary collecting system.

Etiology:

Classification based on etiological factors are broadly divided into two groups, parasitic and non-parasitic causes (1):

1. Parasitic causes: Wuchereria bancrofti-90%, Taenia echinococcus, Taenia nana, Ankylostomiasis, Trichiniasis, Malarial parasites.


Management:

Non-surgical management:
- Dietary modification with fat restricted and high protein diet
- Diethyl cabamazine when filariasis is the cause for chyluria.

Curative management:
- Minimally invasive endoscopic sclerotherapy(2),
- Laser(3),
- Open surgery(4),
- Laparoscopic surgery(5, 6)
resulting in ureteric stricture, renal papillary necrosis, arterial hemorrhage, pseudoaneurysm, acute renal failure with argyrosis of urinary tract (7, 8, 9, 10, 12)

Take home message:

Complications of sclerotherapy (silver nitrate instillation) is more often due to improper use of sclerosant. Precautions to be taken so as to avoid complications include (11):

1) Avoid using higher concentration of silver nitrate (not more than 3 % of silver nitrate solution)
2) Forceful instillation and injection of sclerosant more than the pelvic volume would lead to pyelovenous and pyelolymphatic reflux resulting in vascular and parenchymal damage.
3) Donot wash with normal saline. As normal saline would precipitate silver chloride, which is an opaque precipitate causes obstruction.

**Differential Diagnosis List:** Argyrosis of left upper renal tract with pseudoaneurysm., .

**Final Diagnosis:** Argyrosis of left upper renal tract with pseudoaneurysm.

**References:**

Rowe, E., Mills, I.W. & Patel, A (2002) Laser treatment for chyluria. BJU International 89 (1cr), 139
Description: Plain CT axial section showing, Enlarged left renal silhouette with branching calcific linear density within the calyceal system and parenchyma suggestive of argyrosis of the urinary tract (arrow)

Origin: Department of Radiology, Amrita Institute of Medical Science, Kochi, Kerala, India.
**Description:** Heterogeneously enhancing, enlarged left renal parenchyma with fixity to left psoas muscle and a large pseudo-aneurysm at left renal pelvis (arrow) **Origin:** Department of Radiology, Amrita Institute of Medical Science, Kochi, Kerala, India
Description: Heterogeneously enhancing, enlarged left renal parenchyma with fixity to left psoas muscle (arrow head) Origin: Department of Radiology, Amrita Institute of Medical Science, Kochi, Kerala, India