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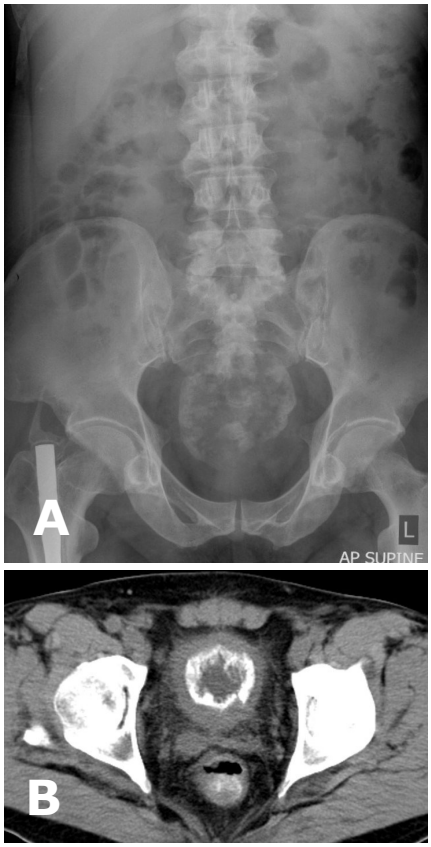

A 57-year-old man presented with severe suprapubic pain which was preceded by 6 months history of bladder irritation symptoms. No history of tuberculosis or any other medical or surgical problem, and no history of travelling abroad. A plain kidney, ureter and bladder (KUB) radiograph revealed an abnormality **(Panel A)** which was confirmed on a computed tomography scan (**Panel B**).

What is diagnosis?

***Answer**: refer to page 157*

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(***Refer to page 146***)

Answer: Extensive bladder wall calcification in non-specific chronic cystitis

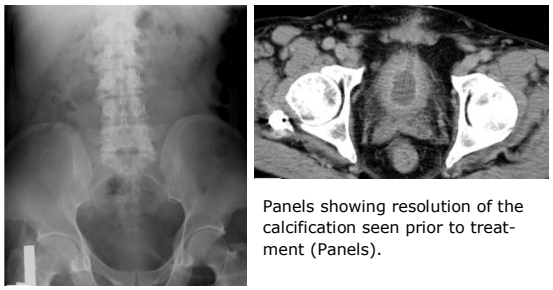
The plain KUB radiograph showed coarse calcification within the pelvis with circumferential involvement, suggestive of urinary bladder wall calcification. A small calcification at the bladder base is suggestive of calculus or dislodged calcification from bladder wall. Both the distal ureters are spared. Computed tomography scan showed bladder wall thickening with irregular circumferential calcification of the bladder mucosa. No enhancing mass seen. The bladder capacity is also reduced. Cystoscopy showed a few bladder calculi with diffuse calcification of the bladder wall. Biopsy excluded primary bladder carcinoma and tuberculosis.

Bladder calcification is relatively uncommon. Worldwide Schistosoma haematobium infestation (Bilharziasis) is the most common cause. Other causes include tuberculosis, primary bladder carcinoma, radiation and cyclophosphamide (cytoxan)-induced cystitis. Extensive calcification in non-specific chronic cystitis is extremely uncommon. [1-3]

The imaging features are nonspecific and one form of cystitis cannot be differentiated from another. Common findings are bladder wall and mucosal thickening with irregularity, and mucosal ulceration of varying intensity. [1, 4] These changes may be focal or diffuse, but extensive circumferential calcification like in case of schistosomiasis is uncommon. Bladder tumours may cause mucosal and bladder wall changes that are similar to the changes seen in cystitis, and vice versa. Differentiating malignancy from cystitis with cystoscopy is also difficult, and biopsy may be required. [1]

This patient underwent percutaneous vesicolithotripsy (PCVL) to remove the bladder stones and the suprapubic catheter (SPC) was kept in-situ. He was also treated with antibiotics, and intravesical sodium bicarbonate with daily instillation for six months. After three months another PCVL was performed to remove the dislodged calcification from bladder wall. The SPC was removed after six months and he had pain free. Serial bladder imaging showed good response to the treatment given **(Panels).**

Bladder calcification is nonspecific and has several aetiologies, and appearance of calcification cannot differentiate the causes. A combination of clinical findings, appropriate laboratory studies, and radiographic evaluation of the calcification and the remaining urinary tract can narrow down the differentials. Cystoscopy and biopsy of the involved tissues is always necessary for confirmation and to rule out bladder neoplasia. [1, 2]



Panels showing resolution of the calcification seen prior to treatment (Panels).

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