

Bilateral calcification of vas deferens, a rare radiologic finding

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Section: Uroradiology & genital male imaging

Area of Interest: Genital / Reproductive system male

Procedure: Diagnostic procedure

Imaging Technique: CT

Special Focus: Pathology Case Type: Clinical Cases

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Patient: 74 years, male

Clinical History:

A 74-year-old gentleman presented with fluid overload on a background of end-stage renal failure and reduction in peritoneal dialysis (PD) efficiency. A non-contrast abdominal CT was obtained, which showed no collection around the tip of the PD catheter and an incidental finding of bilateral vas deferens calcification. (Fig. 1)

Imaging Findings:

Bilateral vas deferens calcifications were identified on both axial and coronal views (Fig. 1 and 2).

Discussion:

Discussion

Calcification of vas deferens is a rare finding in radiology, which can be identified in either plain X-ray films or computed tomography scans. Calcification can involve unilateral vas in certain conditions, whereas in others they occur bilaterally. Up to this date, three separate aetiological factors have been documented in past literature, they include chronic inflammation, type 2 diabetes mellitus, and hyperparathyroidism [1, 2, 3]. They are generally found incidentally in unrelated diagnostic workups.

Pathologically and radiologically, vas deferens calcification in diabetes mellitus can be differentiated from those caused by chronic inflammation [4]. Calcifications seen in patients with chronic inflammation are usually unilateral and segmental, and they are prone to cause obstructions due to the intraluminal nature of the calcifications, whereas in diabetics, both vas deferens are likely to be involved and they are usually mural, indicating that the calcifications occur within the muscular components, with preservation of luminal patency [4]. Occasionally, the calcification continues into the inguinal canal and may be associated with an increased incidence of infertility [5]. Although it has been repetitively emphasised in previous studies that diabetes-induced calcifications do not cause intraluminal obstructions, these patients may also develop failure of emission due to aperistalsis of the vas deferens, resulting in no sperm reaching the posterior urethra [6].

In our study, we presented a patient with end-stage renal failure secondary to longstanding type 2 diabetes mellitus. According to past literature, the abdominal CT scan for our patient has once again proven the mural nature of the calcifications involving bilateral vas deferens (Fig. 2). Although the reason for bilateral involvement of vas in diabetic patients was poorly documented, multiple studies have demonstrated its relationship with diabetes either through plain X-ray KUB films [7] or computed tomography scans [4, 8], and we should become aware that in the presence of calcification involving mainly the wall of the vas in a patient above the age of 50 years, one's attention should be drawn to the possibility of diabetes being present [7].

Conclusion

This report describes bilateral vas deferens calcifications in an elderly patient who has end-stage renal failure on

peritoneal dialysis, secondary to longstanding type 2 diabetes mellitus. Although vas calcification is usually an incidental finding, its significance should not be easily dismissed in individuals who have not yet been diagnosed with diabetes mellitus.

Differential Diagnosis List: Bilateral calcification of vas deferens secondary to T2DM, Chronic inflammation, Hyperparathyroidism

Final Diagnosis: Bilateral calcification of vas deferens secondary to T2DM

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Figure 1

a



Description: Bilateral calcification of vas deferens **Origin:** Moharami Bakhshayeshi B, Department of Radiology, St George Hospital, Kogarah, Australia

Figure 2

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Description: Bilateral calcification of vas deferens, demonstrating luminal patency **Origin:** Moharami Bakhshayeshi B, Department of Radiology, St George Hospital, Kogarah, Australia