

Bilateral Calcification of Vas Deferens

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Abstract

Radiological image of bilateral calcification of vas deferens is presented. The possible etiological factors are discussed. The differentiating points between non-inflammatory and inflammatory causes of the calcification of vas deferens are highlighted.

Key Messages:

Bilateral calcification of the Vas deferens is a very rare finding in a plane X-ray KUB. However the radiologist and urologist should be aware of its possible causes and the patient should be investigated for the underlying disease.

Figure 1

Fig 1 Billateral calcification of vas Deferns



The serpentine calcified structure noted in the pelvis is calcified vas [Fig. 1]. The pattern of calcification is regular and bilaterally symmetrical. In all non-inflammatory causes of the calcification of vas the lumen of the duct is patent and calcification occurs in the muscular elements. In chronic inflammatory conditions there is partial or complete occlusion of the lumen of the vas. Calcification of the vas deferens related to inflammatory causes is more likely to be unilateral and irregular^[1]. The causes of calcification of the vas deferens are: Diabetes mellitus: Diabetes is the most common cause of calcification of vas deferens^[2]. It results in

bilaterally symmetrical calcifications within the muscular components, with preservation of luminal patency i.e. in the wall as is seen very well on the left side and faintly on the right in the figure [3]. Vasa differentia may calcify after relatively short duration of diabetes if the disease starts after the age of 40, whereas if the disease occurs before the age of 40, it has usually been present for at least 15 years before calcification is noted. When there is a linear calcification in the pelvis of diabetic male it should be decided whether it is in the vessels or the genital tract. The anatomy and course of the intra pelvic portion of the vas deferens differs from all arteries. Diabetes is thought to accelerate the process of senescent calcification of the vas deferens. Therefore calcification of the vas generally occurs in a younger patient population in diabetic males.

Degenerative change (Aging): indistinguishable in radiographic appearance from diabetic calcification. By definition, these affected individuals have no evidence of diabetes or other predisposing factors.

Tuberculosis: Intraluminal calcification in the vas deferens causes partial or complete occlusion of the lumen of this structure. Calcification of the vas deferens related to tuberculosis is more likely to be unilateral and irregular^[4].

Other infections: gonorrhea, syphilis, schistosomiasis, and chronic non-specific urinary tract infections. In such cases, like tuberculosis the calcifications are intraluminal and are frequently unilateral and irregular in appearance.

The purpose of this radiological image is to emphasize the importance of the rare finding of vas deferens calcification on plain X-Ray KUB. Patient must always be investigated for the underlying cause. Diabetes mellitus should always be ruled out in these patients. Diabetic patients with basal wall

calcification may also develop failure of emission, where no sperm reach the posterior urethra due to aperistalsis of the vas deferens [5].

References

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