



## Classics in abdominal radiology: a “scrotal pearl”

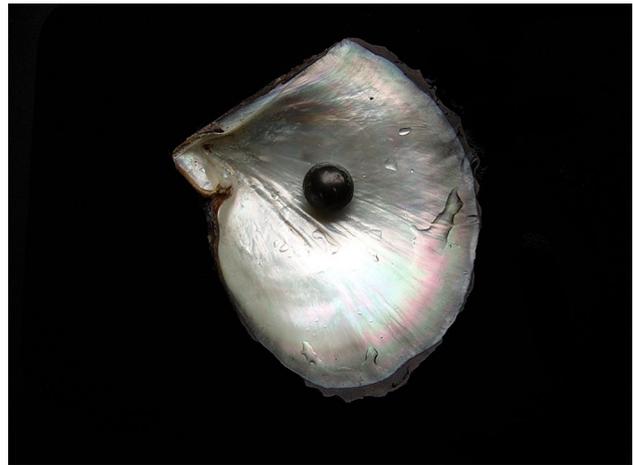
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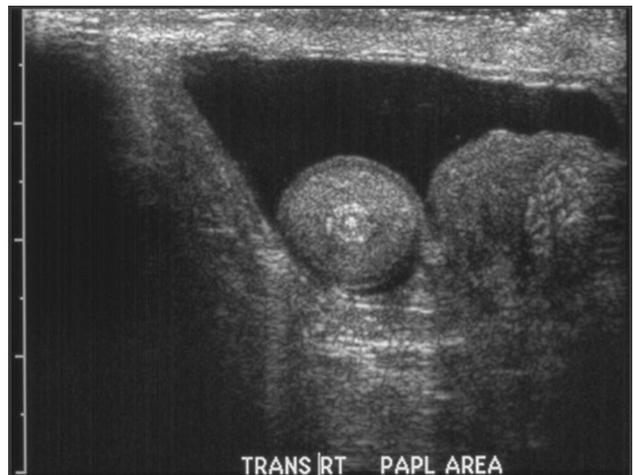
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Natural pearls form when shelled mollusks lay down concentric layers of calcium carbonate in response to an internal irritant (Fig. 1). A “scrotal pearl” was first described in 1935 when a fibrinoid loose body was discovered in the scrotum of a patient during a postmortem examination [1]. Since then, these intrascrotal calculi have been described sonographically in numerous case reports and case series [2–4]. One retrospective study found an incidence of 2.65% in 868 patients referred from urologic and surgical clinics [2].

Scrotal pearls are considered benign findings, usually detected incidentally during sonography. They appear as mobile round echogenic foci lying between the layers of the tunica vaginalis, with larger calculi demonstrating discrete acoustic shadowing (Fig. 2). They can be solitary or multiple and are often associated with a hydrocele, which may render them impalpable on physical exam [5]. Pearls often range in size from several millimeters up to just over 1 cm; however, a giant pearl measuring 8.7×7.2×6.5 cm and weighing 420 g has been described after spontaneous delivery from a patient’s scrotum [4]. The pathogenesis of scrotal pearls is unclear. Proposed etiologies include torsion of an appendix testis or epididymis which subsequently calcifies, chronic inflammation and resultant fibrosis of the tunica vaginalis [5], or repetitive microtrauma similar to that which occurs in mountain bikers [3].



**Fig. 1** Picture of a black pearl in the shell of a pearl oyster. Downloaded from Wiki Commons March 28, 2019 ([https://commons.wikimedia.org/wiki/File:A\\_black\\_pearl\\_and\\_a\\_shell.jpg](https://commons.wikimedia.org/wiki/File:A_black_pearl_and_a_shell.jpg))



**Fig. 2** Grayscale image of the scrotum with a laminated “scrotal pearl” lying between layers of the tunica vaginalis in the presence of a small hydrocele

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## Compliance with ethical standards

**Conflict of interest** The authors declare that they have no conflict of interest.

**Research involving human and animal rights** This article does not contain any studies with human participants or animals performed by any of the authors.

## References

1. Kickham CT (1935) Calcified hydrocele of the tunica vaginalis testis. *N Engl J Med* 212:419
2. Artas H, Orhan I (2007) Scrotal calculi. *J Ultrasound Med* 26(12):1775-1779
3. Mitterberger M, Pinggera GM, Neuwirt H, et al. (2008) Do mountain bikers have a higher risk of scrotal disorders than on-road cyclists? *Clin J Sport Med* 18(1):49-54 <https://doi.org/10.1097/JSM.0b013e31815c042f>
4. Li GH, Li XD, Cheng S, Chen ZD (2005) A large intrascrotal calculus. *Asian J Androl* 7(1):103-105
5. Bushby LH, Miller FN, Rosairo S, Clarke JL, Sidhu PS (2002) Scrotal calcification: ultrasound appearances, distribution and aetiology. *Br J Radiol* 75:283-288

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