

Granulomatous prostatitis



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Patient history

67-year-old man with a history of recurrent superficial bladder tumor. Treatment by bladder instillations of BCG (Bacillus Calmette-Guerin) was started. Six months after the last instillation (the sixth), a rise in PSA level from 3 to 6 ng was noticed, confirmed by a repeat testing. Digital rectal examination showed a prostate firmness, predominantly on the right lobe. A prostate MRI was indicated.

MRI and histological finding

MRI was performed two months after the last instillation of BCG and showed bilateral hypointense areas on T2 weighted images (Figure 1, a-d) with marked restricted diffusion (Figure 1, b-c-e). The ADC value was $550 \text{ mm}^2/\text{s}$. A right posterolateral extra-prostatic extension is visible on T2 images (Figure 1, cross sectional red cross, a-d) and on diffusion-weighted images (Figure 1, b-c-e). The appearance was that of a locally advanced aggressive cancer. Biopsy findings (Figure 1, f) showed a typical epithelioid granuloma (arrow), consisting of a blend of epithelioid and giant cells with lymphocytic and plasmocytic infiltrates: normal prostate gland. The final diagnosis was granulomatous prostatitis, secondary to BCG instillations

Discussion.

Intravesical BCG treatment of selected non-infiltrating bladder tumors is currently the most common cause of granulomatous prostatitis. The clinical presentation is most often indistinguishable from that of prostate cancer (Ref.1), because symptoms are mild or absent.

The PSA level rises in the months following the instillations and the rectal examination can show a prostatic firmness. The MRI appearance simulates prostate cancer and the clinical setting indicates that that granulomatous prostatitis could be the cause of the MRI findings. The presence of gross caseous necrosis (not observed in our case) can be suggested if MRI shows signs of intra or extra-prostatic abscess or fistulous tracts (Ref.1).

If MRI shows no signs of caseous necrosis, granulomatous prostatitis has two MRI characteristics. The first is the highly marked restricted diffusion, ADC values being those of high-grade prostate cancer (Ref.1). The second is the possibility for the granulomatous process to cross the capsule, as in our example. It may even show a restrictive hypo signal in the root of one or both seminal vesicles, simulating an extension of prostate cancer to the seminal vesicles (T3b stage) (Ref. 1). Even if the diagnosis can be suggested because of the knowledge of the clinical setting, biopsy cannot be avoided, because treatment with isoniazid (INH) is recommended for three months (Ref.1). This management requires a histological proof of the diagnosis, especially when the MRI appearance simulates an extra prostatic extension of prostate cancer.

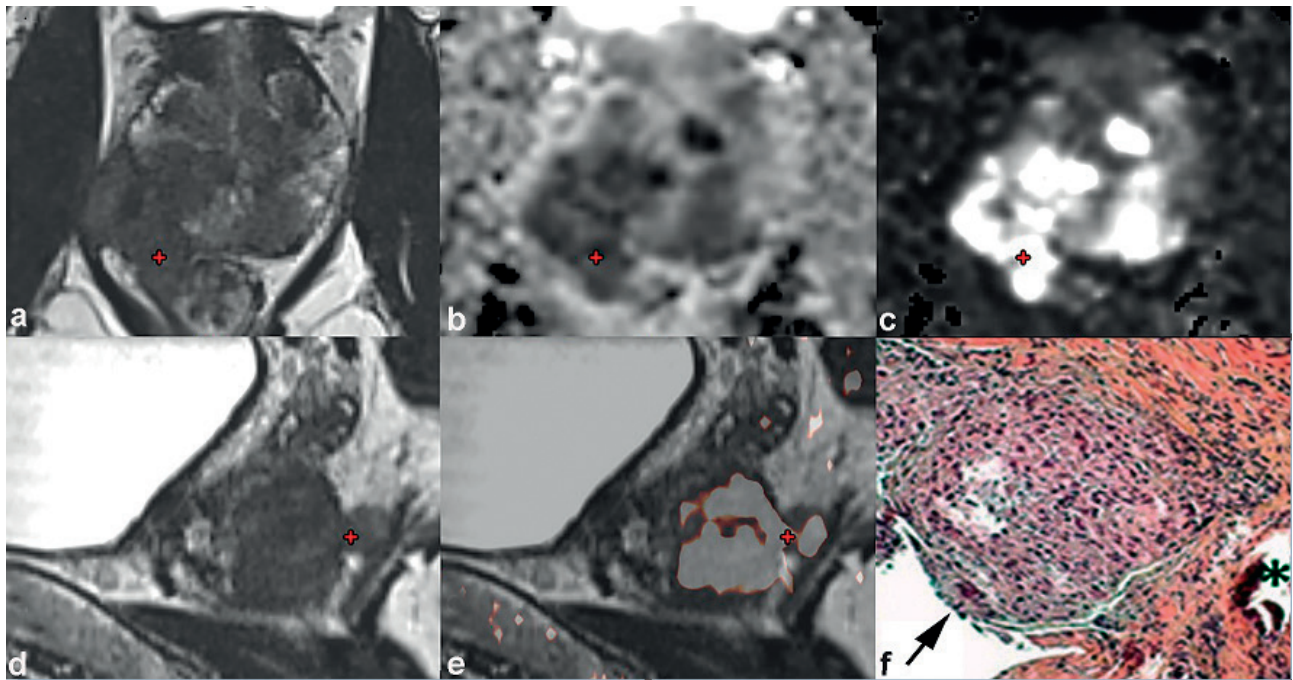


Figure 1

References

1. Bour L, Schull A, Delongchamps NB, Beuvon F, Muradyan N, Legmann P, et al. Multiparametric MRI features of granulomatous prostatitis and tubercular prostate abscess. *Diagnostic and interventional imaging*. 2013;94(1):84-90.

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