

# MRI of the carcinomatous meningitis – rare form of prostate cancer dissemination

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A 75-year-old man, who previously underwent bilateral orchiectomy due to uncontrolled raise of prostate-specific antigen (PSA) was treated with 3 courses of Taxotere chemotherapy for prostate cancer. Bone scintigraphy revealed multiple metastatic lesions in the skull, spine, ribs, left iliac wing, and both humeri. He was admitted to the Oncology Institute with a complaint of dizziness, double vision, malaise, trismus like symptoms and thrombocytopenia. Enhanced magnetic resonance imaging (MRI) of the brain demonstrated diffusely thickened and enhancing dura at the convexity of the brain. No enhancing lesions were seen in the brain parenchyma. Additionally, diffusely decreased T1-weighted signal was demonstrated in the skull bones, clivus, and cervical spine, without mass effect, characteristic for metastatic disease.

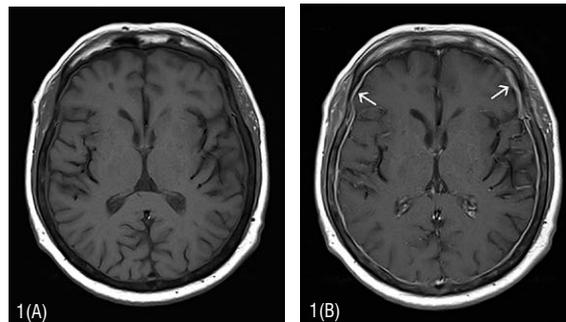
Brain metastases are rare in prostate cancer and occur late in the course of the disease (1). They usually represent the failure of hormone-deprivation therapy and the presence of disseminated disease. The leptomeninges are the most common intracranial sites of prostate cancer metastasis (67%) followed by cerebrum (25%), and cerebellum (8%) (1). Literature data showed that the average time from the diagnosis of prostate cancer to the occurrence of cerebral or meningeal metastatic disease is 60 months (2). Metastasis to the brain can occur by way of Batson's plexus or by direct extension from adjacent structures such as the sphenoid bone or sinuses (3).

## Conflicts of Interest

We declare no conflicts of interest.

## REFERENCES

- 1 Yasufuku T, Shigemura K, Tanaka H, Matsumoto O, Nakano Y, Tanaka K, et al. Carcinomatous meningitis from prostate cancer diagnosed by cerebrospinal fluid cytology and magnetic resonance image: a case report and review of the literature. *Hinyokika Kyo*. 2009;55(6):361-5.
- 2 Lynes WL, Bostwick DG, Freiha FS, Stamey TA. Parenchymal brain metastases from adenocarcinoma of prostate. *Urology*. 1986;28:280-7.
- 3 Capito PR, Wang H, Brem H, Ahn HS, Bryan RN. Magnetic resonance imaging diagnosis of an intracranial metastasis of adenocarcinoma of the prostate: case report. *Md Med J*. 1991;40:113-5.



**Figure 1(A)** Non-enhanced transverse T1 weighted MR image shows diffusely low signal intensity of the skull bone marrow, compatible with metastatic disease; **1(B)** Enhanced transverse T1 weighted MR shows diffusely thickened dura over cerebral convexities with significant uptake of contrast (arrows), associated with mild inhomogenous enhancement of the skull bone marrow

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