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Progressive Bilateral Blindness, Deafness, Lateral Gaze Palsy, and Limb Numbness in A Patient with Systemic Metastatic Prostate Cancer

ABSTRACT

We report on a 59-year-old man with subacute onset of progressive bilateral blindness, deafness, bilateral abducens palsies, peripheral neuropathy presumably of paraneoplastic etiology, diffuse osteosclerotic bone changes of the skeleton, and cervical lymphadenopathy due to a metastatic adenocarcinoma of prostatic origin. The cause of bilateral blindness was probably multifactorial. Optic disc and macular edema, possible optic nerve involvement by leptomeningeal metastasis (meningeal-enhanced lesions), entrapment of the optic nerves at the optic canals by osteoblastic bone formation, and interruption of retinal circulation that resulted in hemorrhagic central retinal vein occlusion (CRVO) were contributing to the pathogenesis. The neuropathic symptoms were mainly sensory. Nerve conduction studies showed asymmetrical involvement of the sensory conduction to a greater extent than that of motor conduction. Similarly, severe osteosclerosis of the petrous bone with narrowing of the internal auditory canal may have caused a permanent damage to the acoustic nerves and deafness. Magnetic resonance images of the brain showed focal leptomeningeal enhancement following intravenous injection of gadolinium-DPTA. X-rays of the skeleton showed diffuse osteosclerosis simulating Paget disease. (N. Taipei J. Med. 2003;5:64-70)

INTRODUCTION

Leptomeningeal metastasis occurs in 3% to 8% of all patients with cancer.¹ The most common solid tumors leading to leptomeningeal metastasis are melanomas, and breast and lung cancers (particularly small

cell carcinomas).² Involvement of the optic nerves most commonly occurs in leptomeningeal lymphoma² and leukemia.³ Ischemic optic neuropathy of both eyes caused by retinal vascular occlusion was reported in a patient with lymphoma and sepsis.⁴ Direct compression of the optic nerve by hormone-resistant pros-

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