Spinal metastases of glioblastoma multiforme in a patient with polyneuropathy

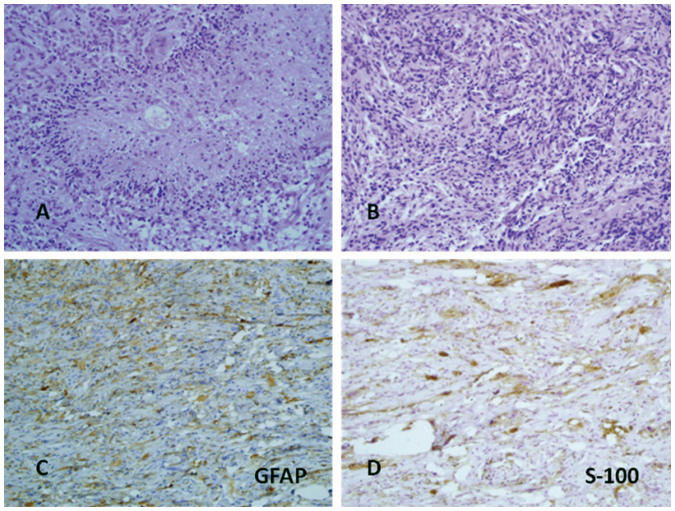

FIG 1. A: High-grade primary brain astrocytoma (H&E × 200); prominent anaplasia, vascular proliferation and pseudopalisading necrosis (tumour cells around necrotic zones). B: Metastatic spinal astrocytoma (H&E × 200); highly cellular area with pleomorphic cells. C: GFAP stain: metastatic spinal astrocytoma (H&E × 200). D: S-100 stain metastatic spinal astrocytoma (H&E × 200).

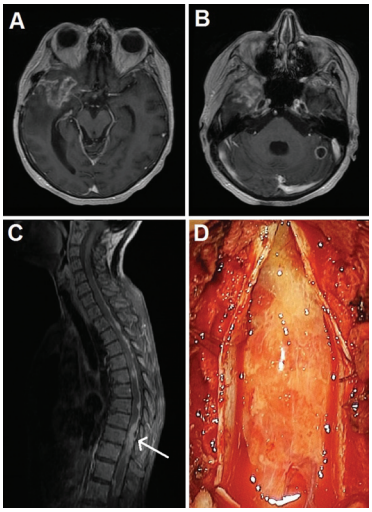

FIG 2. A: T1-weighted axial MRI scan after gadolinium showing enlargement of the residual tumour in the right temporal lobe. B: T1-weighted axial MRI scan after gadolinium showing a new tumour in the left cerebellar hemisphere. C: T2-weighted MRI sagittal scan with fat suppression showing spinal seeding with nodules on the dorsal surface of the spinal cord and intraspinal tumour mass (arrow). D: Intraoperative view after laminectomy T9–10; pathologically thickened and altered spinal cord with metastatic tumour.

A 56-year-old woman was admitted to our department with headache, vomiting and one episode of syncope. There were no neurological symptoms or signs except for confusion. CT scan showed a tumour with surrounding oedema in the right temporal lobe. She underwent a craniotomy, and the histology showed typical changes of glioblastoma multiforme (Fig. 1.) Postoperatively, she received radiotherapy and temozolamide.

Eleven months after surgery, she began to complain of severe lower back pain, paraesthesias and numbness of the lower limbs. On neurological examination, a slight left central facial paresis was noted. Power in the left lower limb was grade 1 (Loveta scale) and in the right lower limb grade 3. Tendon reflexes in the upper limbs were exaggerated, more to the left, but the left knee reflex was weak and the right ankle reflex was absent. There were hypoalgesia and hypesthesia in the legs, especially on the inside of the thighs and distal segments. Nerve conduction studies revealed axonal disorder—reduced motor and sensory nerve amplitude. MRI showed enlargement of the residual tumour in the right temporal lobe and a new tumour in the left cerebellar hemisphere. A post-contrast MRI of the spine showed extensive leptomeningeal enhancement with nodularity from C5 to the end of the cone core and small nodules on the dorsal surface of the spinal cord (Fig. 2). The tumour was removed surgically and histology confirmed the diagnosis of glioblastoma multiforme. The patient died 13 months after the onset of her illness.

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