Acta neurol. belg., 2007, **107**, 134

Neurological image

Tumefactive lesion in multiple sclerosis

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Key words : Multiple sclerosis ; MRI ; demyelination ; tumefactive lesion.

A 36-year old woman with a history of transient hypoesthesia of the right leg 3 years prior to admission developed a 6th nerve palsy. Cerebral MRI revealed multiple T2 hyperintense periventricular and juxtacortical lesions (Fig. 1), three of them with gadolinium enhancement. Diagnosis of multiple sclerosis (MS) was supported by detection of oligoclonal bands in cerebrospinal fluid. Six[th] nerve palsy resolved completely after treatment with intravenous methylprednisolone. Three weeks later the patient came down with a severe right-sided spastic sensorymotor hemiparesis and dysarthria. Cerebral MRI showed a tumor-like mass within the left hemisphere with a calibre of more than 3 cm and surrounding edema (Fig. 1). After excluding differential diagnosis (1) and because of typical open ring pattern of gadolinium enhancement diagnosis of a tumefactive MS-lesion was made (2). After treatment with methylprednisolone followed by plasmapheresis the dysarthria improved and the hemiparesis recovered incompletely. After 3 months the Expanded Disability Status Scale (EDSS) recovered from 7.5 to 6.0 and after 16 months the EDSS was 5.0. Furthermore the upper limb function recovered incompletely and the patient now is able to use the right hand for simple activities of daily life. During 19 months of follow-up no new relapses occurred.

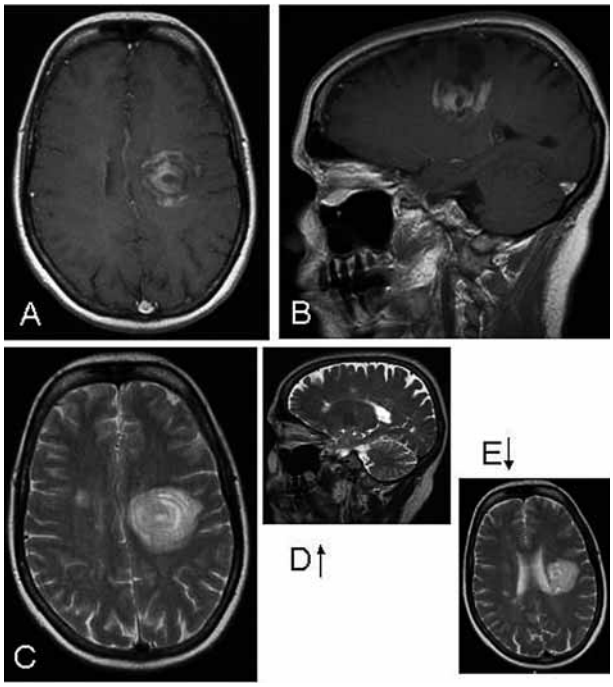

FIG. 1. —Tumefactive lesions in multiple sclerosis on MRI are characterised by T2 hyperintensity (C) and show a concentric ring enhancement (A and B). They are mostly located in the hemispheres and usually smaller and typical periventricular and juxtacortical lesions are present (C, D, E).

Tumefactive lesions are a rare form of MS-lesions characterized by a size > 2 cm (1, 3). These tumor-like lesions can occur either as the initial demyelinating event and may reoccur as relapsing-remitting tumefactive MS (4). Moreover, this type of lesions can develop during the course of relapsing-remitting MS, as shown in our case. Recent reports suggest that this variant of MS is characterized by a fulminant course associated with a poor recovery (1). However, there is only limited data with regard to long-term outcome and response to different treatment options.

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