When and on what to operate in multiple cerebral cysticercosis cysts?

Sir: The indications for surgical treatment in cerebral cysticercosis have been recently reviewed.1-6 Operation is indicated when a single cortical or an intraparenchymatous cyst causes focal symptoms or intracranial hypertension. Another indication is the presence of an intraventricular cyst causing internal hydrocephalus. When there are multiple cysts, treatment is controversial and some questions emerge; for example: when to operate? Which and how many cysts should be approached? Is there a place for only medical treatment?

Recently a 38 year old man was admitted to our department complaining of progressive weakness of his left leg for 13 days. He had suffered from epilepsy for 17 years and was controlled with phenobarbitone and phenytoin. On examination no signs of intracranial hypertension or meningeal irritation were observed. He had an atactic gait and a paretic left leg (grade 3 MRC) with hyperreflexia, and foot clonus without a Babinski sign. CT examination (fig) revealed moderate dilatation of the third and lateral ventricles. Several rounded low-density areas varying in size were observed without contrast enhancement, in both hemispheres. Larger cysts were present in the left fronto-parietal regions. The cause of the left leg palsy was a large cyst located parasagitally in the right pari-etal region. There was apparently no oedema around the cysts and no major local mass effect. Some calcification was noted. These findings are typical of cerebral cysticercosis.3 Despite the administration of corticosteroids (dexamethasone—16 mg/day) for 5 days, there was an increase in weakness in the left leg and operation was performed. Through a right parietal craniotomy a cysticercotic lesion was exposed. It contained clear fluid and necrotic parasites. The cyst was totally removed with its capsule. The left frontal cyst was aspirated through a frontal burr-hole. The weakness of the leg improved immediately after the operation. On the fifth postoperative day a complete recovery of strength of the left leg had occurred. CT one week after the operation demonstrated no cyst in the right parietal region and a marked reduction of the size of the left frontal lesion. Fourteen months after the operation, the patient did not show neurological abnormalities. The seizures were controlled with phenobarbitone (100 mg/day) and phenytoin (300 mg/day).

The focal mass effect was the main cause of the progressive focal neurologic deficit in this patient. This was the reason for no response to the steroid therapy. The value of parasitcides (praziquantel) is uncertain and may be even catastrophic. The destruction of the cyst or cysts may lead to a marked inflammatory reaction with increase of cerebral oedema.5 In our opinion cysticercotic cysts located in functionally important areas of the brain should be considered for operation even when there are multiple lesions. Surgery should be performed if these cysts are producing focal symptoms and are accessible to surgical removal. Reduction of the size of the cysts may reduce the antigenic effect if further administration of parasitcides is planned. This diminishes the inflammatory response commonly observed after the destruction of multiple cysts.5 CT guided stereotactic approach6 could be an alternative, for diagnosis and aspiration of such cysts.

We thank Dr G Minguetti, PhD and Dr M V C Ferreira (CETAC-Curitiba) for the CT examinations.

References