In the control subjects there were 1) no difference in serum or CSF ACT and ITI contents between males and females, 2) no correlation between age and both serum ITI and CSF ACT contents, 3) a positive correlation between serum ACT contents and age (p < 0.02).

Between AD patients and controls, there were no difference in serum or CSF ACT and ITI contents, and no difference of the ACT/CSF/serum ratio (table).

In AD patients there was no correlation between the severity of dementia on MMS and Serum and CSF peaks or serum ACT contents, and a negative correlation between Serum and MMS and B scores and serum ITI contents (p < 0.05).

Our results show that ACT and ITI are not useful markers of AD in serum and CSF. They don't confirm the hypothesis that the def-.

The ACT/CSF/serum ratio was not significantly modified in AD patients, which is consistent with the hypothesis that the blood-brain barrier is not strongly affected in this disease. The correlation between serum ACT contents and the severity of the dementia could be explained by non specific metabolic disturbances.

Are alpha-1-antichymotrypsin and inter-alpha-trypsin inhibitor peripheral markers of Alzheimer's disease?

The definite diagnosis of Alzheimer's disease (AD) requires both clinical criteria of probable AD and neuropathological evidence of AD lesions. At present there is no laboratory test for a pre-mortem diagnosis. Recently, genetic and histochemical studies identified protease inhibitors as components that might be implicated in the formation of the amyloid substance in AD brains. First, Abraham et al. suggested a potential role of alpha-1-antichymotrypsin (ACT) in the pathogenesis of the lesions, moreover Masubara et al. found an increased serum concentration of ACT in AD. Second, several authors* suggested that one transcript of A4 amyloid precursor contained an additional sequence similar to the active site of inter-alpha-trypsin inhibitor (ITI). The purpose of our study was to test the diagnostic value of ACT and ITI in serum and CSF from AD patients. Sera and CSF were collected from eight men and 16 women with probable AD, mean (SD) age 66 (9) years, and from a control group of 19 men and six women aged 64 (3) years. Controls were volunteers free of any neurological disease, with a MMS score higher than 28, who had had a myelo- or radiography for proven disk herniation. CSF was not collected especially for this study. The procedure was approved by the ethical committee of Lille. ACT and ITI contents were measured by electroimmuno- diffusions methods. Semi-quantitative determination was used for ITI in CSF because of its low concentration. Statistical assessment used non parametric tests (Mann and Whitney's U test and Spearman's rank correlation test).

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sampled serially showed little change with time.

Nerve conduction studies showed normal motor latencies, conduction velocities and F wave latencies. The ulnar sensory nerve action potentials were of reduced amplitude but also had normal conduction times, suggesting an axonal degeneration.

A biopsy of the deltoid and quadriceps muscles showed non-specific changes only and no dystrophic features.

In November 1989 an MRI scan of the cervical spine showed the upper cervical cord to be slightly narrowed, but increased signal intensity on the T2 weighted spin echo sequence, the significance of which was unclear.

This patient developed an asymmetrical and patchy wasting and weakness of the shoulder girdle muscles involving several myotomes from C3 to C7. The explanation for the symptomless minimal weakness of the orbicularis oculi and frontalis muscles is uncertain. It may reflect patchy involvement of neurons with similar symptomless involvement of the other cranial nerves such as the bulbar muscles would escape detection) or might merely be constitutional.

We postulated that the neurological abnormalities in our patient are a manifestation of augmentation of irradiation by combination intrathecal and systemic chemotherapy with two potently neurotoxic agents, methotrexate and cytosine arabinoside, in accordance with the intensive UKALL 4 regimen. The predominant features of this case are in keeping with a postirradiation motor neuron syndrome. The minor ophthalmic sensory abnormalities on EMG and without associated clinical symptoms or signs were probably secondary to vincristine.

Four types of radiation myelopathy have been described, the least common being lower motor neuron syndrome. The mechanism underlying this phenomenon is unclear but there is evidence from clinical and pathological studies that radiation injury to vascular endothelium produces ischaemia which leads to selective anterior horn cell degeneration.4,5 Greenfield and Stark observed this phenomenon in three patients, and Sadowsky et al reported it in a fourth.4 All four cases concerned a single cervical lower motor neuron disease confined to lower limb muscles starting three to eight months after irradiation of the spinal axis. All followed a subacute and self-limiting course. In our patient the latent period was longer (2½ years), in keeping with other studies where the average symptom free interval was 14 months,6 but otherwise the disease followed a similar course. Unlike the other cases described, he did not receive direct irradiation to the spinal cord apart from that part of the upper cervical cord included in the field during cranial irradiation.

Byfield5,7 in a patient who developed radiation myelitis of the cervical cord after receiving routine doses of vincristine and radiation therapy and postulated a synergistic effect. In 1975 a histopathological study by Price et al suggested a similar synergism between irradiation and intravenous methotrexate in the development of fatal leukoencephalopathy in children with ALL.8 Intrathecal chemotherapy has a greater neurotoxic effect ranging from a chemical arachnoiditis to transient/permanent paresis and encephalopathy.

Cytosine arabinoside, the other intrathecal agent, has been described, can cause disseminated multifocal coagulation necrosis of white matter and has been implicated in enhancing radiation induced neuronal abnormalities.9 A recent study has shown that intrathecal ara-C significantly reduces the isoeffect doses required for the development of radiation damage in rat spinal cord.10 We are not aware of any previous reports describing an upper cervical cord motor neuron syndrome occurring following cranial irradiation and would be interested to hear if other centres encountered this feature in leukemic patients treated similarly.

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Optic nerve cysticercosis: a case report

Cysticercosis is caused by infection from the larval form of Taenia solium and humans are an intermediate host. The subcutaneous tissue, brain, eye, muscle, heart, liver and peritoneum are common sites of encystment.1 In the eye, the conjunctiva is the most common site. Subretinal and intraretinal locations have also been described.2 Cysticercosis of the intracranial portion of the optic nerve is rare. A 15 year old school girl presented with deteriorating vision in her right eye which had progressed over a seven month period. There was no history of pain or inflammation in the eye, trauma, headache, vomiting, seizures, or any other neurological or systemic examinations were normal. There was no subcutaneous nodule or cafe-au-lait spots. Neurological examination was also normal except for the patient’s inability to count fingers at less than 30 cm with the right eye. The pupils were equal and reacting.

Fundus oculi examination revealed disc pallor in the upper half, disc margins elevated in the lower half and neighboring retina for an area of two dioptries below the disc. Vessels and macula were normal. Pigmentary changes were present. The tension was 17-3 mm in both eyes. Other cranial nerves were normal. The results of neurological examination did not reveal any abnormality.

Haematological and biochemical parameters were normal. The erythrocyte sedimentation rate (ESR) was 26 mm and the VDRL was negative. Skull radiographs of the optic foramen and superior orbital fissures were normal. CT scan of the head and orbit with contrast enhancement showed a subretinal segment of the right optic nerve thickened with a small area of low attenuation in the thickened portion of the optic nerve. Retrobulbar fat was preserved and the muscle cone was normal. The optic nerve at the orbital apex appeared to be of normal width. The brain parenchyma was normal as was the left optic nerve (%). Perimetry revealed superior altitudinous right hemianopia. Ultrasonography showed a mass in the region of the right optic nerve. The Casoni test was negative.

A diagnosis of optic nerve glioma or granuloma was considered. A right frontal craniotomy and extradural frontal orbitotomy was performed. After incising the tenon’s fascia normal retrobulbar fat protruded. The optic nerve was exposed by microdissection and was found to have fusiform thickening. A small portion of nerve just behind the optic globe was normal as was nerve near the apex. Following incision was made over the maximum bulge. There was intense fibrosis. On deeper incision a saigo grain like cyst was found and excised. Histopathology revealed it to be cysticercosis. Postoperatively the patient’s vision fully recovered but there was IIId nerve paresis.

Cysticercosis is one of the most serious public health problems in the developing countries.1 Any part of the neuraxis can be involved, except the peripheral nerves, resulting in protein features.6 Ocular cysticercosis occurs in 3% of cases and may be single, unilateral or bilateral.7 Subretinal involvement of the eye usually occurs initially through the posterior ciliary arteries but migration of the parasite is common. The nasal side of the eye is more commonly involved than the lateral side. This is due to an anatomical peculiarity of the ophthalmic artery which after giving rise the lacrimal branch runs along the medial side of the orbit and divides into its terminal branches.

The optic nerve obtains its blood supply from the branch of the central artery of the retina and retinal blood vessels may thus be involved.

The usual symptoms are of pain, irritation of the eyes due to iridocyclitis and diminness of vision. The eye may be involved alone or may be associated with other clinical features of neuro-cysticercosis when the brain is also involved.

Optic nerve involvement is rare in any kind of cyst or granuloma. As a result, in our