Letters

Depression of essential tremor by alpha-adrenergic blockade

Sir: Evidence exists that the alpha-adrenergic blocking drug thymoxamine (Opilon Forte) depresses activation of the dynamic gamma-motoneurone activity, both in animals[1] and in man.[2 3] As spindle activation may be of importance in the pathophysiology of tremors,[4] we have tested the effect of intravenous thymoxamine, 0·15 mg/kg body weight, versus intravenous placebo on tremor patients not responding to conventional therapy.

After informed consent nine patients were tested by mechanomyographic recording of tremor frequency and amplitude before and 2·5 min after completion of the injection. Four of the patients suffered from static tremor judged as essential tremor and five resting tremor of Parkinsonian or senile type or both. Thymoxamine did not change tremor frequency in either group, but the tremor amplitude was reduced, as a mean to 18% of the pre-injection values, in patients with essential tremor ($p < 0·01$). No reduction of tremor amplitude was found in patients with Parkinsonian or senile tremor or both.

Alpha-adrenergic blocking drugs may thus be an alternative choice in the treatment of essential tremor. Further, our results indicate that spindle activation through dynamic gamma-motoneurones plays a role in the pathophysiology of essential tremor.

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Received 8 August 1981
Accepted 3 September 1981

Hepatocellular carcinoma with cranial metastasis and hyperglobulinaemia

Sir: Hepatocellular carcinoma has a well established association with alcoholic cirrhosis of liver. Bony metastases have been reported in the past with an incidence of 3-12%.[1] There has been only a single case report of multiple scattered asymptomatic osteolytic cranial metastases in the past.[2] We report two patients of hepatocellular carcinoma diagnosed at necropsy, the first one presented with proptosis and total opthalmoplegia on the right side, and the second had mild right monoparesis and dysphasia at presentation; both had diffuse serum hyperglobulinaemia.

Case 1 JH aged 65 yr, was admitted in 1979 with a three weeks history of diplopia, progressive painful right sided proptosis and ptosis, intermittent right temporal and facial pain and loss of sensation on the right side of the face. He had consumed alcohol in excess for 15 years. Multiple spider naevi were present on the shoulders but no other clinical features of hepatic cirrhosis were present. The left lobe of the liver was palpable 3 cm below the sternal angle, it was soft, non-tender and there was no bruit. On examination he was confused, but alert; he had total right ophthalmoplegia, and a pronounced non-pulsatile right-sided proptosis with marked conjunctival chemosis, there was no orbital bruit. Fundi were normal and visual acuity was reduced to N/48 in the right eye; field testing was unreliable. He had a sensory loss in the distribution of the first and second divisions of the right trigeminal nerve. Apart from a mild sensory neuropathy in the legs, the rest of the nervous system was normal. Other systems were clinically normal. Haematological profile showed macrocytosis and evidence of disseminated intravascular coagulation. Liver functions gave evidence of cholestasis and hepatocellular dysfunction. (Alkaline phosphatase raised to 399 IU/l, elevated SGOT and SGPT and reversal of albumin globin ratio.) Immunoelectrophoresis showed increased IgG (22·15 g/l); IgA (10·05 g/l) and IgM (3·1 g/l). Serum antinuclear factor was markedly raised. Blood VDRL and TPHA were negative. Sternal marrow aspirate showed marked plasmacytosis and the marrow was infiltrated with undifferentiated malignant cells of uncertain origin. Chest radiograph showed a soft tissue shadow at the left anterior second costochondral junction without bone destruction, radiographs of the skull were normal, but those of the lumbosacral spine done for persistent backache showed a doubtful osteolytic lesion in the fifth lumbar vertebra. Isotope brain scan showed minimal increase in the uptake on the right side in the anterioposterior projection but not the lateral views. A diagnosis of alcoholic cirrhosis with metastic carcinoma of unknown origin, involving the right orbital apex was made. The patient died on the ninth day in hospital due to bronchopneumonia. At necropsy positive findings included evidence of mixed nodular cirrhosis of liver with antemortem thrombosis of the portal veins, metastatic deposits in the porta hepatis, and presence of a non-capsulated tumour (approximately 6 cm × 4 cm) in the left lobe of the liver with microscopic features of poorly differentiated hepatocellular carcinoma. In the skull, all the right extra ocular muscles had tumour infiltration, the floor of the middle cranial fossa was eroded, the cavernous sinus was not thrombosed and cerebral parenchyma was not infiltrated. The metastasis was histologically identical to the liver primary.

Case 2 WG aged 55 years was admitted with a three months history of tiredness, anorexia and loss of 20 pounds (9 kg) in weight. Three years previously a diagnosis of alcoholic cirrhosis had been made. On examination he was jaundiced, drowsy, with multiple spider naevi, clubbing and palmar erythema but no oedema. He had a soft non-tender, non-pulsatile fixed swelling of approximately 5 cm × 7 cm over the left fronto-parietal region. The liver was enlarged 4-5 cm, was hard, non-tender and non-nodular; the spleenic tip was just palpable and there was no ascitis. On initial examination he was drowsy but orientated, and dysphasic, but over the next three days he became progressively confused and agitated and developed slight weakness of right upper limb. Other systems were normal. Blood count was normal. Liver function tests showed evidence of choles-