hypothesis, are clearly anterior to the limits of the haemato ma (fig). Moreover, the absence of weakness suggests that the internal capsule, located between the haemato ma and the hypothalamus, is unaffected. Hypo thermia might therefore be ascribed to a damage to the efferent pathways from the hypothalamus to the brainstem.

Bilateral lesions of the hypothalamus seem necessary to produce thermic dysregulation, whereas unilateral damage to the medulla ob longata appears to be sufficient.1 In our case, the initial downward gaze palsy indicates a bilateral involvement of the upper mesencephalon.1 This can be compared to Wernicke’s en cephalopathy where hypoth er mia may occur, and where the mesodience phalic lesions, although more extended rostro-caudally, are bilateral.8

To our knowledge, no previous observation of hypoth er mia related to a mesodience phalic lesion has previously been reported. Its rarity might be explained by the need for bilateral lesions, and the fact that hypoth er mia may go unnoticed.

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**Intranasal apomorphine: a new treatment in Parkinson’s disease**

Apomorphine, a directly acting dopamine agonist, has recently been used in the treatment of Parkinson’s disease complicated by motor fluctuations. Benefit is seen rapidly and reliably following subcutaneous injection. We have sought alternative, more convenient routes of delivery for the drug. Effective mucosal absorption has been reported and we now describe the use of apomorphine delivered intranasally.

Eight patients with Parkinson’s disease were studied. Their mean age was 58-1 years (48-70), duration of disease 12-9 years (5-22), and length of treatment with levodopa 11-8

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**Table**

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Age mean (SD)</th>
<th>Sex (female/male)</th>
<th>SIR mean (SD) pmol/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control patients</td>
<td>27</td>
<td>35 (3)</td>
<td>10/17</td>
<td>113.9 (6.3)</td>
</tr>
<tr>
<td>Epileptic patients</td>
<td>16</td>
<td>46 (6)</td>
<td>6/10</td>
<td>135.6 (9.0)</td>
</tr>
<tr>
<td>Subgroup with recent convolution</td>
<td>6</td>
<td>52 (8)</td>
<td>2/4</td>
<td>166.6 (12.3)*</td>
</tr>
<tr>
<td>Cerebrovascular disease</td>
<td>20</td>
<td>51 (4)</td>
<td>5/15</td>
<td>125.5 (11.3)</td>
</tr>
<tr>
<td>Subgroup with recent infarction</td>
<td>5</td>
<td>54 (6)</td>
<td>1/4</td>
<td>184.6 (21.6)**</td>
</tr>
</tbody>
</table>

*significantly different from epileptic patients (p < 0.01, Wilcoxon test)
**significantly different from cerebrovascular disease (p < 0.01)

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**Somatostatin in cerebrospinal fluid after generalised convulsions or cerebral infarction in humans**

A role for somatostatin in the generation of epileptic seizures is discussed as increased concentrations of this peptide in epileptic focus have been reported.1 In the cerebrospinal fluid (CSF) of rats increased levels of somatostatin-like immunoreactivity (SIR) were found following ethylentetrazol-induced convulsions.3 The same group of investigators, however, was unable to demonstrate a change of CSF SIR levels in nine epileptic patients presenting with generalised convulsions.4

We have measured SIR by specific radioimmunoassay5 in the CSF of 16 patients with epilepsy (table). Of these, eight patients were treated with phenytoin, two with phenytoin and phenobarbital, two with carbamazepine and primidone, one with bromazepam. The patients received no anti-convulsant drugs. There were no significant differences or trends in SIR levels apparent when patients were grouped according to their drug treatment.

In six patients generalised convulsions preceded the lumbar puncture by periods of several hours to three days. Their levels were compared with those of epileptic patients without recent seizures, of control patients without proven neurological diseases and of patients with cardiovascular disease (CVD) and cerebral infarction. The mean level of the epileptic patients was not significantly different from that of the control patient group and that of the group of patients with cerebral infarction. This preliminary study suggests that intranasal delivery may offer an effective alternative to subcutaneous injection of apomorphine. The benefits of the latter, including the speed and quality of motor response, appear to be retained in most cases with this simpler technique, prompting further evaluation of its long-term use.

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1 Walton RP, Lacey C. Absorption of drugs through the oral mucosa. J Pharmacol Exp Therap 1959;45:61-76.
Autoscopy in hemianopic field

Autoscopy is the visual perception of oneself or part of one’s body into the external visual space. Although this is the conventional definition, autoscopy phenomena need not always be visual, nor need it be perceived in front of the viewer. It has been described in normal subjects, in organic neurological, functional (migraine, epilepsy) and psychiatric disorders. Autoscopy in focal cerebral lesions is a 'false self-image', and autoscopy images appearing in the hemianopic field are still rarer. Our case had a right occipital infarct with autoscopy in the left hemianopic field.

A sixty year old male was admitted with a history of bifrontal throbbing headache which started suddenly two weeks before. About one week after the onset, the headache became worse and almost simultaneously the patient started seeing his own image in front of him on the left side. Five days later, at the time of admission he was able to give a detailed account of his experience. The image first appeared as a thin line about 30 cm in front of him, more towards the left, and persisted for three to four minutes. He could identify the face and upper part of the body including the colour of the shirt and the face. Thereafter, it appeared for a few minutes several times a day. There was no warning, and no general pattern to the frequency, time of occurrence, or movements performed by the "double".

On one occasion, he saw his "double" while he was brushing his teeth. At another time he was sitting on his bed and saw the image turning around and walking away. The image always appeared as a thin line in front of him, and disappeared when the patient closed his eyes. At first the patient’s emotional reaction was one of anxiety and amazement but later he became indifferent to the presence of "his companion". The patient did not drink alcohol nor use psychotropic drugs. There was no history of vascular, head or psychiatric disorder.

The general physical examination was unremarkable. Apart from the autoscopy and irritability, he was functioning normally and was fully aware of the "unrealistic nature of his companion". There was bilateral papilledema and left homonymous hemianopia but no other neurological abnormalities.

Routine blood and urine examinations were normal apart from a high blood sugar which was controlled with plain insulin. Blood urea, serum creatinine and serum proteins were normal. VDRL was non-reactive and LE cells were negative. EEG, EKG, VEP (full field stimulation) and roentgenograms of the head and chest were normal. CT scan showed a mixed density irregular lesion with contrast enhancement and surrounding oedema in the right occipital cortex consistent with an infarct.

Autoscopy has been defined as a "complex psychosensorial hallucinatory perception of one’s own body image projected into the external visual space". Autoscopy is seen in organic and psychiatric autopsychic disorders. The body image is our concept of the shape, size and mass of our body and its parts. The concept of body schema is not an instinct. As a child grows, there is creation of a tridimensional model of the body and the surrounding space. External and internal stimuli contribute to the creation of this model which is dynamic and fluctuates according to circumstances. In addition to the organic parts, certain other attributes are also represented in this model, such as, ego or possessiveness. The conventional body image is not confined to the physical body alone but includes the clothes and objects of daily use.

The body schema concept is a global function of the brain and requires processing at different parts for its expression. Various names and classifications have been suggested for body schema disorder. The following classification is based on the tridimensional model. Changes in body schema are classified into those affecting its shape, size, mass and position in space. According to this classification autopsychia is a disturbance of body schema affecting the shape. Autopsychia experience involving senses other than vision have been described in which autoscopy is either present or absent and variable auditory characteristics. The image involves the whole body or part of it, but it always includes the face. It may be transparent, opaque or coloured and may show expansions.

Autoscopy may be associated with infecions and intoxications, especially chronic alcoholism and typhoid fever; psychoses; epilepsy; migraine, and diffuse and focal cerebral lesions.

There is no satisfactory explanation for this phenomenon. But it is likely that autoscopy is due to abnormalities in a high level system which is responsible for the representation of the body in its environment. In the absence of this system may result in misinterpretation of the body in space. Although autoscopy does not have any localising value, it may be an early manifestation of a focal cerebral lesion.

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