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and methaqualone. A sample of this substance was shown to contain opiates.

Case 2. A 20-year-old labourer was admitted during 1990, after losing consciousness while smoking a combination of dagga and 'brown sugar'. On examination he was hypothermic and cyanosed. Pupils were pinpoint and there was no response to painful stimuli. Blood pressure was 70 systolic and pulse 65/min (in atrial fibrillation). Bilateral coarse crackles were heard on auscultation. A chest radiograph showed diffuse bilateral soft infiltrates throughout both lung fields (Fig. 1). A tentative diagnosis of opiate overdose with non-cardiac pulmonary oedema was made. The pulmonary arterial wedge pressure was 12 mmHg and cardiac output 6,8 l/min. The patient was intubated, ventilated with high concentrations of oxygen, and warmed. Urine opiate levels were found to be 5 710 ng/ml (which is extremely high). The administration of naloxone (only 0,8 ml) resulted in the patient's attempting to extubate himself while still requiring high concentrations of inspired oxygen. The substance smoked could not be obtained. The patient was ventilated for 1 week as a result of impaired consciousness. The features of opiate intoxication related to drug abuse are well documented.[1]

Depression of respiration and depression of consciousness are universal manifestations of opiate intoxication.[1] Pulmonary oedema occurs in nearly 50% of cases of overdose.[1,2] The mechanism of the oedema is unknown, but a neurologically mediated increase in alveolar capillary permeability via brainstem receptors may be important.[3]

Treatment is supportive alone. Opiate antagonists are used, although their use has been associated with pulmonary oedema in other settings.[3]

The smoking of opiates may have become favoured in order to avoid the consequences of intravenous use, especially AIDS (S. de Miranda — personal communication). The advent of a newcomer to the local recreational drug market should be viewed with concern.

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Holoprosencephaly — the use of magnetic resonance imaging and application in antenatal diagnosis

To the Editor: Holoprosencephaly is the result of disordered organogenesis within the central nervous system where the forebrain fails to undergo diverticulation and development between the 4th and 8th week of fetal life.[1] It is associated with facial abnormalities. It is a rare condition (1:5 200 to 1:16 000 live births), usually diagnosed by antenatal ultrasound scanning.[1] This, however, represents 16% or more of all cases of fetal hydrocephalus detected.[1] In view of the serious nature of this condition, recognition of its morphological appearance on ultrasound examination is important to direct further management and patient counselling.

Computed tomography and magnetic resonance imaging (MRI) provide additional confidence and accuracy of diagnosis to complement the information obtained by ultrasound. MRI is the optimal method for definitive investigation, owing to its multiplanar capabilities and excellent tissue contrast differentiation.[2] Two cases are presented in which MRI was used to obtain further information in this condition.

Case 1. A 1-day-old microcephalic neonate, whose mother had received no antenatal investigation, was referred for intracranial ultrasound examination. The small size of the anterior fontanelle made this very difficult technically. The ventricular appearance of holoprosencephaly was demonstrated, although classification could not be established or other causes of hydrocephalus ruled out. After magnetic resonance imaging (MRI) (Gyrex V O, 5T Elscint) a confident diagnosis of semilobar holoprosencephaly was made, with a large monoventricular system, a rudimentary falx cerebri and interhemispheric fissure (Fig. 1). The thalami were fused. In addition, the facial features of hypotelorism and a cleft lip were demonstrated.

Case 2. At 14 weeks' gestation, a routine ultrasound examination showed the intracranial features of holoprosencephaly. Termination of pregnancy was initially refused, and subsequently a stillborn cyclops fetus was delivered at 32 weeks. MRI performed before autopsy demonstrated alobar holoprosencephaly, a small brain, a monoventricle with a dorsal cyst (Fig. 2), absent falx cerebri and interhemispheric fissure, and fused thalami. Associated features of a single midline eye, proboscis and abnormal migration of facial processes were noted.

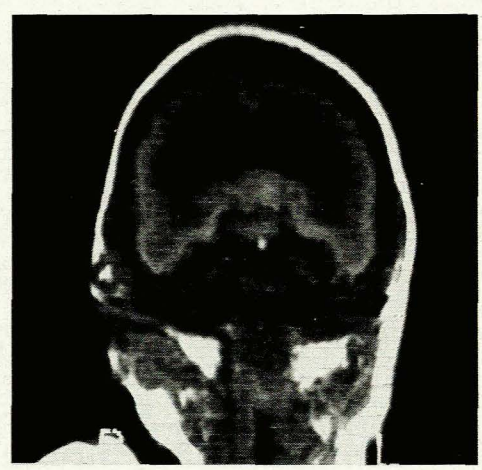

FIG 1.
Semilobar holoprosencephaly, case 1. Magnetic resonance coronal scan (short TR, short TE - T1 weighted).

The degree of disordered organogenesis is graded by severity into alobar, semilobar and lobar holoprosencephaly.[2-4]

Facial abnormalities are common in all degrees of holoprosencephaly, with bilateral cleft lip and hypotelorism being the most frequent association. Cyclopia and abnormal midface fusion is only seen in the most severe forms. Neonates with alobar and semilobar conditions have a very poor life expectancy, with an expected survival of less than

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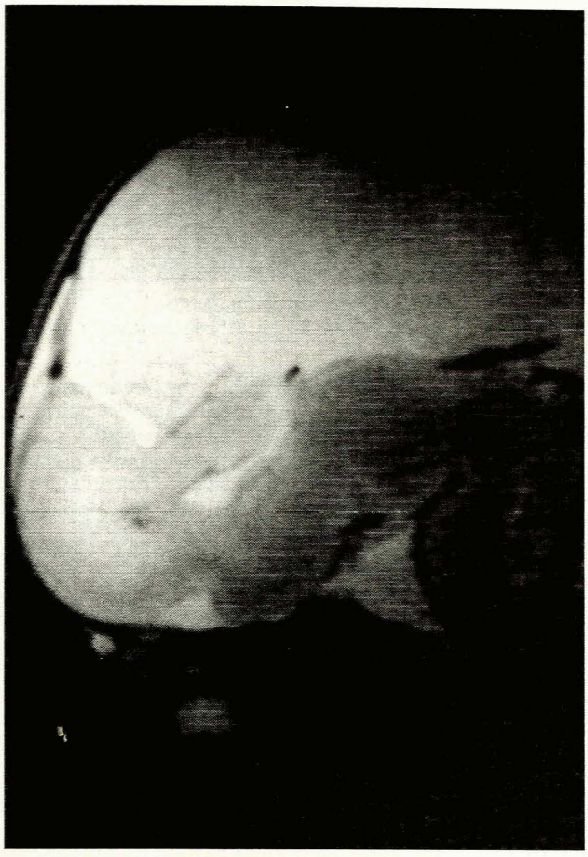

FIG 2.
Alobar holoprosencephaly, case 2. Magnetic resonance midline sagittal scan (long TR, long TE - T2 weighted).

1 year. Lobar holoprosencephaly, however, has a variable prognosis.

Both cases illustrate aspects of the investigation and management of holoprosencephaly. In case 1, the importance of an appropriate imaging method to demonstrate the severity of the condition and exclude treatable conditions provided the paediatrician with the information to manage both child and mother on a long-term basis. Case 2 illustrates the most severe end of the spectrum of malformation and illustrates the importance of a confident antenatal diagnosis by ultrasound imaging and, because of the known poor prognosis, termination of pregnancy with genetic screening and counselling may be indicated.

It is important to differentiate this condition from ventriculomegaly, Dandy-Walker cyst, hydranencephaly and other causes of hydrocephalus which may require caesarean section and early neurosurgical intervention.[4]

The morphology of holoprosencephaly must be recognised as the majority of cases are isolated, sporadic and clinically unsuspected. Magnetic resonance imaging can be used safely after the first trimester of pregnancy[5] to supplement the ultrasound examination. Although technically difficult, MRI has been shown in some situations to be superior to fetal ultrasound.[2] With ultrasonic indication of fetal intracranial anomaly, MRI should be considered to confirm the diagnosis.[6]

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Letters
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The reversibility of cancer, 10 years on

To the Editor: In 1983 I reported the effect of gamma-linolenic acid (GLA) on primary liver cancer.[1] In June 1985 the Editor wrote to me: 'I think it entirely reasonable that any good reputable journal such as the *SAMJ* should refrain from publishing results on cancer 'cures' unless good scientific data containing sufficient numbers of patients followed in a controlled double-blind study, accompanies the report.' Even though such an approach will exclude articles on aspirin, digoxin and penicillin from the *SAMJ*, since none of these had double-blind studies, I have refrained from submitting any work to the *Journal* since and will continue to publish elsewhere. I would just like to give an update on the work after 10 years.

Since the original article by Dippenaar and Booyens appeared in the *SAMJ* in 1983,[2] a total of 44 articles showing that GLA and other fatty acids and metabolic intermediates exhibit cytotoxic effects have appeared world-wide. An open trial[3] and a double-blind trial by me have been published,[4] as well as a matched-pair trial of malignant gastro-intestinal tumours.[5] As far as survival of 'open' cases is concerned, I have patients with mesothelioma who have survived for up to 10 years, patients with metastasised ovarian carcinoma who have survived for 7 and 5 years, patients with astrocytoma who have survived for 7 and 6 years, and many more.

To use Smit's[6] term, the IOS (index of suffering) of our patients is very, very low and the TRM (treatment-related mortality) is zero, while the ADT (apparent disappearance of tumour) is not less than for ordinary chemotherapy.

I undertake to submit another update in 10 years' time.

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