

## When seeing is believing

A hallucination is a false perception with no external stimulus, and should be distinguished from an illusion, where there is a distortion of perception. Normal people may experience hallucinations, especially when falling asleep or when waking up, and any sense may be affected. The most common hallucinations in mentally ill patients are auditory "voices," reported most frequently in schizophrenic patients. Visual hallucinations are also common. In one study<sup>1</sup> of mental patients with hallucinations the visual ones were elicited about as frequently as auditory hallucinations in manic-depressive and schizophrenic patients and in patients with "organic" disturbances; only in paranoid patients were visual hallucinations relatively uncommon. Indeed, visual hallucinations are often present in psychiatric patients but may be overlooked after brief or superficial interviewing.

Among less obviously psychotic patients, however, visual hallucinations have more definite implications. Psychiatrists are well aware that physical illness may present as psychiatric disease. Herridge<sup>2</sup> found that half of a series of 209 patients consecutively admitted to hospital with psychiatric illness had some physical upset, and in only a few patients was this irrelevant to the psychiatric condition. Similarly, Davies<sup>3</sup> reported a 42% incidence of physical disease related to initial psychiatric complaints. In another survey of 200 consecutive inpatients<sup>4</sup> the incidence of physical illness was one in three: 70% of these illnesses were considered severe, and half were unknown to either the patient or his doctor. Johnson found a lower incidence (12%) in 250 consecutive admissions.<sup>5</sup>

In a large-scale study<sup>6</sup> reported last year from Texas 658 consecutive psychiatric patients presenting at a suburban community mental health centre underwent a detailed evaluation, including a thorough physical examination. Each patient completed a symptom check list. Almost 10% of patients reported four or more symptoms, and of these 60% showed evidence of disease supported by laboratory tests, compared with only 3% of patients free from physical symptoms. Over three-quarters of the illnesses in the group with symptoms had been previously unrecognised. Of the total sample, almost 10% had a medical condition thought to be definitely or probably responsible for the psychiatric symptoms. The most frequent medical diagnoses were cardiovascular and endocrine disorders, followed by infection, pulmonary disease, gastrointestinal disorders, blood diseases, central nervous system abnormalities, and malignant disorders.

Visual hallucinations, distortions, and illusions were found to be the best symptoms in discriminating between medically produced and functional psychiatric disorders. In these outpatients, in contrast to psychotic inpatients, physical illness should be suspected in those who complain of visual hallucinations. Many medical conditions are associated with visual hallucinations, among the more common being infection (especially in the elderly) and cardiovascular impairment. Hallucinations tend to be commoner in acute organic reactions due to drugs or metabolic abnormalities than after trauma or anoxia.<sup>7</sup> Thyroid dysfunction should be especially sought. Drug-induced phenomena usually start as heightened visual perceptions and finally become organised visual hallucinations. Psychotropic drugs such as the tricyclic antidepressants<sup>8</sup> and anticholinergic agents<sup>9</sup> are well known to produce these effects. Bromocriptine, a dopamine agonist, has also been reported to induce visual hallucinations.<sup>10</sup> Nevertheless, the most extreme instances are seen with the hallucinogens, such

as lysergide, and in the withdrawal of alcohol and similar depressants of the central nervous system.

- <sup>1</sup> Lowe, G R, *British Journal of Psychiatry*, 1973, **123**, 621.
- <sup>2</sup> Herridge, C F, *Lancet*, 1960, **2**, 949.
- <sup>3</sup> Davies, D W, *British Journal of Psychiatry*, 1965, **111**, 27.
- <sup>4</sup> Maguire, G P, and Granville-Grossman, K L, *British Journal of Psychiatry*, 1968, **114**, 1365.
- <sup>5</sup> Johnson, D A W, *Practitioner*, 1968, **200**, 686.
- <sup>6</sup> Hall, R C W, et al, *Archives of General Psychiatry*, 1978, **35**, 1315.
- <sup>7</sup> Lishman, W A, *Organic Psychiatry*. Oxford, Blackwell, 1978.
- <sup>8</sup> Hudgens, R W, et al, *Journal of the American Medical Association*, 1966, **198**, 81.
- <sup>9</sup> Longo, V G, *Pharmacological Reviews*, 1966, **18**, 965.
- <sup>10</sup> White, A C, and Murphy, T J C, *British Journal of Psychiatry*, 1977, **130**, 104.

## Haematuria after closed trauma

Patients who have haematuria after a blow to the back or abdomen may have only contusions (which account for most cases), major parenchymal lacerations, or shattered kidneys (critical injuries on the classification of Sargent and Marquardt<sup>1</sup>).

The amount of haematuria shows no correlation with the extent of the injury. Guerriero *et al*<sup>2</sup> noted gross haematuria in only 10 out of 33 patients with injuries to the renal pedicle; these 10 patients also had severe parenchymal damage. Both renal artery thrombosis and renal vein avulsion have been recorded in patients with no or only microscopic haematuria.<sup>3-6</sup> Gross haematuria after minimal trauma should suggest the possibility of an underlying pre-existing abnormality such as hydronephrosis.

Excretion urography should be undertaken as an emergency in all cases. While the results may be normal in many patients with haematuria after closed trauma,<sup>7</sup> any selective policy based on the severity of the haematuria will allow important and correctable lesions to go undetected in some instances.<sup>8</sup> Excretion urography is also essential to establish function of the contralateral kidney. Occasionally a contused kidney will be found not to function on routine excretion urography; high-dose urography combined with tomography reduces the risk of error.<sup>9</sup> Nevertheless, in most patients the results of excretion urography will be normal. Almost all of these patients will recover spontaneously on a conservative regimen and further immediate investigation is not warranted.

Immediate selective renal angiography should be considered only in the few patients who have substantial abnormalities shown on excretion urography<sup>10</sup> (severe renal injury with grossly impaired or no function), since the technique defines the injury more clearly.<sup>11 12</sup> Retrograde studies should not be performed because of the great risk of introducing infection into the damaged kidney. Even the advocates of renal scanning<sup>13 14</sup> concede that angiography provides better anatomical detail once a major renal injury has been discovered.

Angiography can also be used to predict the outcome of the injury in terms of renal function. A finding of obstruction to a main renal artery, for example, carries a poor prognosis. Patients with extensive renal ischaemia will require surgery, while those with only parenchymal injury are unlikely to need exploration.<sup>10</sup> Indeed, the clinical management of patients with serious renal injury should be based on the assumption that conservative treatment will usually fail in those with substantial renal ischaemia and succeed in those with an intact arterial tree.