convenient roll tops are now available. The gelatinous hydroxides, which are precipitated in the sweat ducts, may linger on for a while, and treatment every two or three weeks may often suffice.

The Hurley-Shelley operation is used less often now. Ellis and Scurr, with experience of this operation on some 200 patients, used the aluminium mixture on a further 42 patients all of whom were ready to submit to surgery. Only four of these eventually had an operation, all because of persistent soreness and irritation from the lotion.¹¹

But if axillary hyperhidrosis can now be dealt with fairly well, with an effective and safe operation available for the minority of patients who cannot tolerate the aluminium chloride mixture, the same cannot be said for palmar sweating. Clearly conservative measures should be used if possible, but the results of using both tranquillisers and systemic anticholinergics, with all their side effects, have usually been disappointing. In the past topical applications have not had much success either, but there have recently been reports of good results with methenamine (hexamine)¹⁴ and with nightly applications of the alcoholic aluminium chloride hexahydrate mixture.¹⁵ This general failure of topical applications led to efforts to drive the chemicals into the skin electrically with iontophoresis and to the surprising finding that ordinary tap water acts almost as well as any of these solutions and at the same time avoids systemic side effects. Levit has given a clear account of the practical details of tap water iontophoresis.¹⁶ Once a reduction in sweating has been obtained treatment every few weeks may suffice, and patients may then avoid endless trips to hospital by acquiring a simple and effective apparatus to use themselves at home.

Other techniques such as biofeedback and conditioning¹⁷ are still in their infancy but may offer some hope in the future. At present, however, if a fair trial of the above methods has not helped then sympathectomy should be considered. An operation which may require exploration through important deep structures in the neck or the removal of parts of the ribs should never be undertaken lightly. Various surgical approaches are available, but the supraclavicular route seems to carry an especially high risk of causing Horner's syndrome,³ and Kux's endoscopic technique⁴ is perhaps the least traumatic. Sympathectomy denervates the sweat glands not just of the palm but of up to one fifth of the body surface,¹⁸ and compensatory sweating in other areas may become a problem. Despite this, patients relieved of their wet hands are kind about the operation, and the long term results are usually satisfactory.

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Locking up patients with psychiatric illness

Most inpatients with psychiatric illness are treated in open wards,¹ but for a time a few may be nursed in seclusion.² The latter is defined as the containment of a patient alone in a room or enclosed area from which he has no way out^{3 4}; today such restraint is used in psychiatric hospitals,⁵ secure units,⁶ and special hospitals.⁷

Seclusion is carried out in two main circumstances: firstly, in an emergency to help cope with disturbed behaviour; and, secondly, and probably much less commonly, with the patient's consent in behaviour modification programmes.^{4 8} Occasionally, however, there is no clear cut difference between these two activities, but whatever the reason the result is that an ill person may be isolated from human contact in a bare room for an unspecified period. Although prison rules govern removal from association and the use of solitary confinement, there is no statutory control of these procedures in the National Health Service. Moreover, the Department of Health and Social Security guidelines on the management of violent or potentially violent patients⁹ have been criticised for their inadequacy.¹⁰

Doctors have a clear responsibility to prevent abuses of seclusion.² In 1974 a patient at the Broadmoor special hospital alleged that he was locked up by himself almost continuously for five weeks in a dirty room with a plastic mattress and no furniture on a stone or concrete floor. He was dressed in pyjamas, with no footwear. The ventilation was said to be inadequate and the room had no toilet facilities, except for two plastic chamberpots, which showed signs of use by a previous occupant. During his first week in the room the patient was not provided with toilet paper, only pieces of newspaper. His complaint of inhumane and degrading treatment was investigated by the European Commission of Human Rights (application number 6840/74): and subsequently, in 1979, new working guidelines concerning seclusion were introduced at Broadmoor.¹¹ Nevertheless, such cases rarely come to public notice.^{7 12 13} Indeed, few papers have been published on the theoretical basis¹⁴⁻¹⁶ and clinical use of seclusion.¹⁶⁻¹⁹ Estimates from the United States are that between 4%¹⁷ and 26%¹⁶ of general psychiatric inpatients are secluded in the course of their hospital admission. This action

is usually taken because the patient is violent, unresponsive to standard treatment, and is hazarding the safety of the ward environment. A senior nurse normally makes the initial decision to begin seclusion and a doctor makes an assessment later. Typically, secluded patients have schizophrenia or mania: other diagnoses are less frequent. As a group secluded patients are significantly younger and stay in hospital longer than non-secluded patients.¹⁶⁻¹⁸ There are few other differences between the two groups.

The use of seclusion in practice is described in a report from a 25 bed long stay British ward for disturbed and aggressive women.¹⁹ In a year there were 69 episodes of seclusion, affecting 15 patients. In half of the incidents seclusion lasted for less than an hour; the average duration was two and a half hours and the longest period 23 hours. Peak occasions for seclusion were mealtimes and days when there was a change of nursing shifts. About half the patients were settled or asleep while in seclusion, but the rest kept up a disturbance. In a quarter of the episodes patients continued to be disruptive after seclusion; nevertheless, generally seclusion was succeeded by quiet behaviour.

There is probably some truth in the belief that seclusion secures "an irritable brain from causes of increased irritability."²⁰ Nevertheless, its benefits, when they occur, are more likely to be due to appropriate medication and attention from staff. Moreover, like many medical interventions, seclusion may also have adverse effects. In one study of 63 patients such difficulties were noted in 30 cases¹⁸: 19 patients assaulted staff; eight deliberately injured themselves; four destroyed the room; in four the mental state deteriorated; and three patients deteriorated physically because of unrecognised organic conditions. Finally, in no fewer than 16 of the 63 cases few or no medical records were kept of the seclusion.

As a minimum safeguard hospitals should always have strict regulations about the use of seclusion; these should include the requirement that secluded patients are visited routinely and often by medical and nursing staff. Each of the special hospitals has an established procedure for using and recording seclusion, and similar arrangements apply in mental hospitals.¹¹⁻²¹⁻²² None the less, both in Parliament and in the National Health Service concern is still being expressed about the use of seclusion.²² Perhaps this concern should also be linked to recognising that the National Health Service has to find ways of treating more of its disruptive and aggressive patients without resorting to bans on admission or relying on the prison service.²³⁻²⁴ Finally, because an excessive use of seclusion may, say, be a consequence of a shortage of nursing staff,⁴⁻¹² or of a failure to consider other forms of psychiatric treatment, I welcome that the commission considering the new Mental Health Act is expected to take a close interest in it.²²

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Double indemnity in oesophageal carcinoma?

Oesophagectomy for cancer has a mortality reaching 30% in some series—the highest mortality of any routinely performed operation.¹ Incomplete excision of the tumour and its microscopic local extensions exposes the patient to this high operative risk for little benefit; for if he survives long enough he will develop a recurrence of malignant dysphagia. The longitudinal extent of spread of oesophageal squamous carcinoma has been well studied, and skip lesions occur at a distance from the main tumour.² Histological examination of frozen sections has been advocated during surgical resection to determine if the cut ends are clear of tumour,³⁻⁴ but the histologist cannot examine the whole oesophageal circumference within a reasonable time limit, and he may miss small skip lesions. A minimum clearance of 12 cm from macroscopically detectable growth was advocated 20 years ago.⁵ Nevertheless, one quarter of all resections are still thought to be incomplete.⁶

Several authors have emphasised the extraoesophageal spread of carcinoma as seen in operation specimens² and at necropsy.⁷ Logan in Edinburgh attempted the first radical resections with block dissection of the adjacent connective tissues and lymph nodes.⁸ Radiological studies have shown,