is usually taken because the patient is violent, unresponsive to standard treatment, and is harming 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 longstay 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 cases19: 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 17 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 3 Histological examination of frozen sections has been advocated during surgical resection to determine if the cut ends are clear of tumour,4 5 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.6 Nevertheless, one quarter of all resections are still thought to be incomplete.6

Several authors have emphasised the extramucosal 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...
Ampicillin and alternatives

Since its introduction in 1961 ampicillin has become the antibiotic of choice for the treatment of many infections, as the recommendations in the British National Formulary indicate. It is widely prescribed and in a recent survey in a district general hospital 41% of all antibiotic prescriptions were for ampicillin.

Various esters of ampicillin (pivampicillin, bacampicillin, and talampicillin) and related compounds or ampicillin analogues (ciclamicillin, epipenicillin, and amoxycillin) have been developed, but do these other agents have any real advantages over ampicillin? These three esters are hydrolysed to ampicillin after absorption from the gut so that antibacterial activity is identical with that of ampicillin. Epipenicillin (not available in Britain) is an antibacterial agent in its own right, but its spectrum and activity are similar to those of ampicillin. At best the in vitro activity of ciclamicillin is only one quarter that of ampicillin and it performs badly against some Gram negative species. It is more resistant to the effects of staphylococcal β-lactamase than ampicillin but a study in volunteers suggested that there was little difference between the activities of the two drugs in vivo. Amoxicillin also has a spectrum of activity similar to that of ampicillin, but reports of its use in Gram negative infections in mice suggest that it may be more effective in vivo. Ampicillin and amoxicillin were given in doses to achieve equal serum concentrations. Although the minimum inhibitory concentrations of the two agents were the same, amoxicillin had a greater protective effect as judged by reduction in size of the infective lesion, number of viable organisms obtained from the lesion, and survival of the animals. In contrast with this work recent studies suggest that some Enterobacteriaceae are susceptible to ampicillin but resistant to amoxicillin.

Despite the similarity in their activity the antibacterial agents vary in their pharmacokinetics. Ampicillin is only moderately well absorbed from the gut (about 40% is recovered in the urine). The esters and related compounds are more completely absorbed. Equal oral doses of amoxicillin and ampicillin achieve serum concentrations at a ratio of 2:1 and the urinary concentration of amoxicillin is higher. Bacampicillin and talampicillin have similar absorption characteristics to amoxicillin. Verbiest reported that pivampicillin was better absorbed than amoxicillin, while other authors consider that its absorption is between that of amoxicillin and ampicillin. Peak serum concentrations of ciclamicillin are thought to be five times higher than those of ampicillin after equal doses, but the excretion of ciclamicillin is fast and the concentrations fall rapidly. The enhanced absorption of amoxicillin, talampicillin, bacampicillin, and pivampicillin means that they may be given less often than ampicillin.