pairment of the kidneys may lead to unequal excretion of antibacterial agents and persistence of infection in the kidney with the poorer function. In these patients the most useful drugs are probably the penicillins, co-trimoxazole, and gentamicin because adequate urinary concentrations of these drugs can be obtained without systemic toxicity. Thus in the case of co-trimoxazole both the sulphonamide and trimethoprim are excreted in sufficient concentration despite the presence of advanced kidney failure.

Two drugs must be avoided in treating UTI in the presence of kidney failure. Firstly, the tetracyclines must be avoided because, with the exception of doxycycline, they greatly aggravate kidney failure by producing a natriuresis that leads to salt depletion and prerenal renal failure further aggravated by the vomiting that the salt depletion may induce. Tetracycline also prevents urea utilisation by the liver and so produces an even greater rise of serum urea concentration. The second drug is nitrofurantoin since not only is it ineffective in renal failure but it may also produce a serious irreversible peripheral neuropathy.

TREATMENT OF PROSTATIC INFECTION

Bacterial infection of the prostate is an important source of recurrent UTI in men. It is difficult to eradicate because many

of the commonly used antibacterial agents fail to penetrate prostatic fluid and even if they do they may not be fully effective in the prostatic fluid that is highly acidic. Only the basic macrolides (erythromycin and oleandomycin), co-trimoxazole, tetracycline, and clindamycin are found in the prostatic fluid in concentrations high enough to suggest any therapeutic potential. Ampicillin, cephalothin, kanamycin, nalidixic acid, nitrofurantoin, oxytetracycline, penicillin G, polymyxin B, and some sulphonamides are either not excreted into the prostatic fluid or are present in such low concentrations as to be useless for treatment. The factors that govern the transport of antibacterial agents into the prostatic fluid include their degree of protein binding, their pKa value, and most importantly their lipid solubility.

PLACE OF SURGERY IN TREATMENT

The role of surgery in relieving obstructive lesions, removing stones, and removing an infected, poorly functioning kidney is not in doubt. Urethral dilatation is not of value in preventing recurrent UTI, and the value of ureteric reimplantation for vesicoureteric reflux is now being studied by controlled treatment trials in two cities in Britain. The results of these studies should be awaited before surgical treatment of vesicoureteric reflux is advised.

Contemporary Themes

Hospital inpatient provision for patients with dementia

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Elderly people suffer from a wide range of mental disorders. Among these, the dementias are particularly important because they produce great disability and are not yet reversible. Most demented people live at home with their families, and much can be done to support them by domiciliary services and forms of partial hospitalisation. Nevertheless, some elderly demented people are cared for in institutions and most would agree that this constitutes optimal care for some.

Residential care for demented old people is provided by statutory and voluntary bodies—mental hospitals, geriatric hospitals, Part III accommodation, and charitable institutions. The balance between services varies across Britain, owing more to historical accident and precedent than planning. Central planning of health care facilities is now to supplant the vagaries of local evolution. It is important to be sure that these plans allow for as adequate a service as those they seek to replace.

Proposals

Psychiatric hospitals are to provide 2.5-3.0 beds for every 1000 people aged 65 and over to accommodate severely demented patients, while local authorities are expected to cater for mildly demented people and geriatric hospitals for demented people when they are physically ill.¹ Clearly this ration of beds was derived from the estimate of beds occupied by demented patients in mental hospitals in 1971.² Details of the original survey³ are available, and the statistics and research division of the DHSS will provide further information. The range of provision for demented patients under psychiatric care was considerable in 1971, and eight of the 14 English regions fell outside the suggested range of 2.5-3.0 beds per 1000 people aged 65 or more (table I). Other sources⁴ quantify the distribution of "geriatric" beds throughout the country and show that they too are unevenly distributed (table II).

For some time it has been recognised that many old people in hospital because of their need for mental nursing are to be found in chronic sick or geriatric hospitals,⁵ and it is sometimes suggested that where there are active geriatric services the elderly need fewer psychiatric services.⁶ This may be so but in terms of bed provision region by region there is no consistently greater provision of geriatric facilities in areas where few beds in psychiatric hospitals are available to demented patients.

It is less easy to reflect local authority provision of residential care on a regional basis, yet this certainly complements and often supplements hospital services. In South Manchester in November 1975 21 beds were provided for elderly demented patients by psychiatric hospitals for a population of 193 000, of whom 28 000 were

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65 and over. Local geriatric hospitals contained 59 patients, whose sole disability was a severe dementia. In addition, a survey of old peoples' homes suggested that 10% of the residents were severely demented—that is, 70 people derived from the catchment population.

TABLE I—Mental illness beds/1000 population aged 65 and over occupied by demented patients in 1971

Region	Beds/1000	Ranking
Newcastle	3.2	13
Leeds	3.0	12
Sheffield	2.0	3
East Anglia	2.5	7
NW Metropolitan	2.4	6
NE Metropolitan	2.0	5
SE Metropolitan	1.9	2
SW Metropolitan	4.5	14
Oxford	2.0	4
South-west	2.6	8
Birmingham	2.9	11
Manchester	1.7	1
Liverpool	2.6	10
Wessex	2.6	9

Source: Further information obtained from Statistics and Research Division, 2C, DHSS to supplement data contained in table 15 of *Statistical Report Series No 100*.³

TABLE II—Distribution of geriatric beds/1000 population aged 65 and over in 1973

Region	Beds/1000	Ranking
Newcastle	9.2	10
Leeds	11.0	14
Sheffield	9.1	9
East Anglia	8.7	5
NW Metropolitan	6.7	1
NE Metropolitan	8.9	6
SE Metropolitan	7.8	3
SW Metropolitan	7.2	2
Oxford	9.9	12
South-west	9.0	7
Birmingham	10.2	13
Manchester	9.2	11
Liverpool	9.1	8
Wessex	7.8	4

Source: Table 4.11(a), *Health and Personal Social Services Statistics for England 1975*.⁴

What is the effectiveness of electronically controlled thermometers?

I cannot imagine why anyone would want to use an electronically operated thermometer when the traditional mercury in glass thermometer is cheap, reliable, safe, easily sterilised, and acceptable to the patient. In hospitals it is often necessary to monitor temperature continuously during special procedures when the patient's temperature may be deliberately lowered or at risk from drifting downwards or sometimes upwards during the procedure or treatment that is being undertaken. Examples would be the premature baby or sick neonate with congenital heart disease being treated in an incubator; the baby who is being investigated or operated on under general anaesthesia; or the patient who is being subjected to deliberate hypothermia during cardiac surgery. For such patients it is necessary to maintain the internal temperature at the chosen level, and to this end the temperature is usually monitored continuously by electronically operated thermometers placed in oesophagus and rectum.

Is there any firm evidence that geographical location (soil, hard or soft water, etc) or climate have any effect on the development or progress of "rheumatic" or "arthritic" processes?

Geography and climate do not exert a strong influence on rheumatic conditions. Although rheumatoid arthritis is known in all races, it is usually much milder in Afro-Asians, wherever they are living. Most arthritics find their symptoms more tolerable in dry, moderate heat, but a few prefer the cold. There is some evidence accumulating that the natural incidence of involutional osteoporosis (and dental caries) is less in hard water areas. There are a few rare instances of regional

Thus, while returns based on a survey of psychiatric hospitals would have contributed only 21 to the national pool, a survey of both geriatric and psychiatric hospitals would have contributed 80, and if severely demented people living in old peoples' homes were included the contribution would be 150.

Similar findings could probably be repeated throughout the country, though the distribution of beds used by demented patients between the three arms of the service may vary with locality. It will not be possible to maintain the status quo if the number of beds for the elderly severely mentally infirm is the same as that formerly provided by the psychiatric service.

Comment

It is essential that the 1971 survey of inpatients be repeated and extended to include not only psychiatric hospitals but also geriatric hospitals, and to be truly comprehensive it should include Part III accommodation. The figures from such a survey would provide a reasonable reflection of bed provision for elderly demented people now.

In planning resources for the future it should not be impossible to take account of predicted changes in the age structure of the elderly population and to include beds for younger people who are demented.

References

- 1 Department of Health and Social Security, *Services for Mental Illness related to Old Age*, HM (72)71. London, DHSS, 1972.
- 2 Eason, R J, and Grimes, J A, *Health Trends* 8, 1976, p 13.
- 3 Department of Health and Social Security, *Statistical Report Series No. 10*. London, HMSO, 1972.
- 4 Department of Health and Social Security, *Health and Personal Social Services Statistics for England 1975*. London, HMSO, 1976.
- 5 McKeown, T, et al, *Lancet*, 1961, 1, 818.
- 6 Wing, J K, and Hailey, A M, *Evaluating a Community Psychiatric Service*. London, Nuffield Provincial Hospital Trust, OUP, 1972.

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joint disease, such as precocious osteoarthritis (Kashin-Beck) in Northern Russia, due to infection of grain by the fungus *Fusaria*.

Is prednisolone still the treatment of choice for Bell's palsy?

There is no reason to abandon the use of steroids in treating Bell's palsy.¹ The dose of prednisolone is now 60 mg daily for five days followed by 40 mg, 20 mg, and 10 mg for one day each without adverse effect. It is essential to start treatment as soon as possible and the results are better in younger patients—that is, less than 45 years old.

¹ Taverner, D, Cohen, S B, and Hutchinson, B C, *British Medical Journal*, 1971, 4, 21.

Some patients with tropical sprue cannot tolerate tetracycline treatment for a month. What is the best alternative?

Various broad-spectrum oral antibacterial drugs have been successfully used in treating tropical sprue. These include succinylsulphathiazole, 10 g daily for five days followed by chlortetracycline, 2 g daily for five days, and then chloramphenicol, 2 g daily for five days¹; succinylsulphathiazole for five to eighteen months²; and lincomycin 500 mg twice daily for one to three weeks.³

¹ O'Brien, W, *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 1968, 62, 148.
² Rickles, F R, et al, *Annals of Internal Medicine*, 1972, 76, 203.
³ Desai, H G, et al, *Indian Journal of Medical Sciences*, 1973, 27, 509.