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# "The Rising Tide"

Special psychiatric services for the elderly now exist, some very well developed, in about half of all health districts, and over one tenth of all consultants in general psychiatry specialise in work with the elderly.[1] This development has taken place largely over the past decade, reflecting both progress in psychiatry and growing concern about how to cope with *The Rising Tide*[2] of mental disorder in old age. The tide threatens to overwhelm the health and social services (where it has not already done so). Awful buildings, prehistoric thinking, and a vague hope that it will all go away or be dealt with by someone else have still too often nourished complacency, punctured only occasionally by media worthy scandals when the greatest deficiencies in this non-strategy have broken surface.

It is to the credit of the director of the Health Advisory Service that he has made psychogeriatric services the special interest of his organisation in recent years, culminating in the publication of a document which brings together good sense and hard won experience in establishing such services. *The Rising Tide* should help particularly in those districts where people have not been able or willing to plan an effective response. People may turn also to a new textbook[3] which devotes two detailed chapters to psychogeriatric services, and these also provide references to the already large volume of published work. A recent excellent personal review of issues and achievements has come from the Centre for Policy on Aging, which has chosen to launch its new series of policy studies with Alison Norman's *Mental Illness in Old Age*.[4] The growing spate of publications itself reflects the urgency of the matter.

Coupled with the appearance of *The Rising Tide* has been an announcement by the Minister for Health that an extra £6 million is to be made available over three years—about £130 000 per region a year.[5] Not that this is a lot of money in relation to the scale of mental disorders in old age—for between half a million and a million old people suffer from dementia and about twice as many again from other mental disorders—but it is helpful both practically and symbolically. Much more investment will be needed if there is everywhere to be a minimum standard of decent services, but even relatively little cash can catalyse action, enable people to try new things, or help established services to do even better or to propagate their work more effectively. The Health Advisory Service and the Minister make it clear that we already have much to show in this topic—and it is further to disseminate this, rather than to recommend something new, that *The Rising Tide* has been put together.

So it is astonishing to find that the new money is intended to be spent wholly on "demonstration." The money needs to be made available on a flexible basis and the intention that whichever districts obtain some of it will be designated as their region's "demonstration development districts" is entirely inappropriate. What we need is "development," and the fudging of the distinction between "development" and "demonstration" mars this important initiative. For, amazingly, it is intended to designate demonstration development districts not because they actually have something to demonstrate but on the basis of what they *propose* to do. No doubt some of these proposals will eventually yield things worth demonstrating—but only time can tell. Nevertheless, other districts will very appropriately be seeking merely to copy what is already established as good practice elsewhere and may well be inhibited from applying to "demonstrate" when in fact they wish merely to emulate.

Nor is there any analogy with "demonstration centres" already established in the sister specialty of geriatrics, where a couple of long established excellent units have been so designated, thereby receiving extra funds in order more effectively to be able to demonstrate the work that they are already famous for. Yet if the new money were to go only to our best units the "rich" would get richer and the poor would be no better off; while to give all the money only to deprived or underdeveloped districts and at the same time designate them as the demonstration districts of their regions makes no sense at all.

No one is in any doubt that the hearts of the Minister and his officials are in the right place, and it is a pity that the proposals cannot be welcomed as they stand. Preoccupation with "demonstration" seems to have emerged as a late and confusing extra theme detracting from the main body of thought. Was it a compromise between the intention, previously announced to Parliament,[6] to establish demonstration centres in psychogeriatrics analogous to those in geriatrics and the wish to encourage development in places where there is very little? These two birds are not to be killed with one stone.

The idea of "demonstration" should either be scrapped (there seems little enthusiasm from those who run the best known units for such formal designation) or it should be disarticulated from the quite separate, and in many respects contrary, purpose of "development." If the Department of Health is keen to have a scheme for designating demonstration districts then let it be discussed in detail with the Royal College of Psychiatrists and other interests. No drafts of the

official statements (or of *The Rising Tide*) were shown to the college for comment, despite a happy tradition of consultation on such matters; no doubt agreement could be reached, for on essential purposes there is no dispute. Why not let the new awards go simply to good schemes for improving the services?—they could be called, say, "development awards," and could go to places that have nothing, to leading centres to enable them to do still better, and to all points in between. Tested repute rather than formal designation may safely continue to identify what is worth demonstrating.

The pattern of small steps forward across the country will be varied. If we are to make strides to keep our feet dry this £6 million will need to be followed by much more.

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[1] Wattis J, Wattis L, Arie T. Psychogeriatrics: a national survey of a new branch of psychiatry. *Br Med J* 1981;**282**:1529-33.
[2] Health Advisory Service. *The rising tide: developing services for mental illness in old age*. Sutton, Surrey: National Health Service, Health Advisory Service, 1982.
[3] Levy R, Post F, eds. *Psychiatry of late life*. Oxford: Blackwell, 1982.
[4] Norman A. *Mental illness in old age: meeting the challenge*. London: Centre for Policy on Ageing, 1982.
[5] Department of Health and Social Security. Press release 1983 Jan 4. (*Policy Studies in Ageing*. No 1.)
[6] House of Commons. *Official report* (*Hansard*) 1982 Nov 8; cols 329-30.

# Disequilibrium hypercalcaemia

The management of a patient with severe hypercalcaemia is largely determined by the stability of the condition. Many patients, particularly those with mild hyperparathyroidism, have a raised serum calcium concentration which is stable over a long period,[1] so detailed investigation may precede treatment.[2] The stability of the hypercalcaemia reflects a balance between the destruction and the formation of bone (equilibrium hypercalcaemia)[1-3]; but when this balance is disturbed the resultant hypercalcaemia (disequilibrium hypercalcaemia) is unstable and may present as a hypercalcaemic crisis.[4]

In disequilibrium hypercalcaemia net bone destruction leads to an increased calcium load which must be excreted if homoeostasis is to be preserved. Unfortunately even in the presence of normal renal function some of this calcium will be reabsorbed[5] and accumulates in the extracellular fluid with resultant hypercalcaemia. As the serum calcium concentration rises the function of the distal tubule becomes progressively impaired and its ability to conserve salt and water is lost.[6 7] The main defence against the threat of volume depletion is to increase sodium reabsorption by the proximal tubule of the kidney, but since the transport of calcium is closely linked with sodium[8] the ability to excrete the excess calcium load is restricted. The problem is compounded by contraction of the extracellular fluid volume, which reduces the glomerular filtration rate and thus the filtered calcium load. The combination of all these renal changes may result in an unstable serum calcium concentration which tends to rise and may reach values that threaten life.

Malignant disease is the commonest cause of hypercalcaemia in a hospital population,[9] but hyperparathyroidism with osteitis fibrosa and renal impairment may also lead to disequilibrium hypercalcaemia.[1] The main cause of hypercalcaemia in vitamin D intoxication and sarcoidosis is an increase in calcium absorption,[10] but both conditions can lead to resorption of bone,[10 11] calcification of soft tissue, and nephrocalcinosis, and may lead to renal impairment and disequilibrium hypercalcaemia. This is particularly true in hypoparathyroidism treated with vitamin D, where hypercalcaemia may be precipitated by an increase in calcium intake, treatment with thiazide diuretics,[12] or impaired renal function. Less common causes include immobilisation in any condition associated with increased bone turnover, including Paget's disease, thyrotoxicosis, hyperparathyroidism, or the action of thiazides in mild hyperparathyroidism.[13]

The cause of disequilibrium hypercalcaemia is usually apparent from the history, physical examination, or simple investigations. In one study three-quarters of the patients with malignant hypercalcaemia had obvious metastases at presentation.[14] A hypercalcaemic crisis needs prompt treatment, which should not be delayed by any detailed investigations: few, if any, biochemical measurements reliably distinguish between the various causes of hypercalcaemia. The serum phosphate concentration has little discriminating value,[9 15] and though estimation of the parathyroid hormone activity may be helpful it is not invariably so[16]—certainly treatment should not be delayed by waiting for the result.

Laboratory tests show that during a calcium infusion there is normally a curvilinear relation between the serum calcium concentration and the calcium excretion expressed per unit of glomerular filtrate.[17] The relation may be less clear in severe hypercalcaemia due to changes in acid-base state, renal damage, or abnormal protein binding of calcium—for example, in myeloma—but it does provide a reasonable approximation for clinical use. The relative contributions to the genesis of hypercalcaemia of calcium load (rise in calcium excretion) and tubular reabsorption (shift to the right in the relation between calcium excretion and serum calcium) can be assessed and changes in these two variables monitored during treatment.[18 19]

Treatment should begin with intravenous saline to re-expand the extracellular fluid, restore the glomerular filtration rate, and reduce the stimulus to reabsorption of sodium and calcium. The average sodium deficit is around 10 mmol(mEq)/kg body weight,[20] but continued fluid and further electrolytes are usually required because of persisting nephrogenic diabetes insipidus.[6 7] Rehydration alone may reduce the hypercalcaemia by over 0·5 mmol/l (2·0 mg/100 ml),[20] and some patients may not need any additional treatment.

In forced saline diuresis large volumes of saline (10-20 litres for 24 hours) are given together with a loop diuretic (frusemide 100-200 mg two-hourly) to inhibit calcium reabsorption by the kidney.[21 22] This combination may lower the serum calcium concentration by as much as 1·0 mmol/l, but close laboratory support is essential to prevent serious imbalance in the electrolytes, and few centres have the facilities or the skill required.

The alternative is to reduce the calcium load by the use of agents which inhibit bone resorption. At present the choice is either calcitonin,[23-26] mithramycin,[27 28] or phosphates.[29 30] Corticosteroids act slowly and their effects are unpredictable,[30-32] while indomethacin has proved disappointing in the treatment of malignant hypercalcaemia.[33] The bisphosphonates offer considerable promise; disodium etidronate is