Acute Myocardial Necrosis in Paracetamol Poisoning

STR.—Acute paracetamol poisoning is a well-known cause of centrilobular hepatic necrosis and renal tubular damage, but to date only one necropsy case has been recorded with proved cardiomyopathy.¹ A further case is therefore now reported.

A 15-year-old girl died 40 hours after taking 36 tablets of Lobak (each containing 450 mg paracetamol and 100 mg chlorzemezanone). At necropsy, numerous areas of purplish discoloration were seen in the left ventricular myocardium, highly suggestive of recent necroses. The liver was congested with a prominent nutmeg pattern. The right kidney was congenitally absent; the left was twice the normal size, mainly through compensatory hypertrophy, and had a rather widened pale cortex. Histologically, there was obvious centrilobular hepatic necrosis. Fatty change was seen in both the viable and necrotic liver cells. The central and mid zones were intensely hyperaemic. Patchy polymorphonuclear leucocytic infiltration was present in the portal tracts, with definite but early bile ductular proliferation. In the kidneys, the convoluted tubules and Henle's loops showed marked fatty degeneration and there was patchy epithelial necrosis. The collecting tubules contained eosinophilic casts composed partly of amorphous debris and partly of necrotic desquamated epithelial cells. The myocardium showed mild to moderate fatty degeneration and confluent early focal necroses, with irregular loss of staining and focal clumping of myofibrils in P.T.A.H. stains (Fig. X273).

The maximum hepatotoxic effect of paracetamol is known to occur between two and four days from ingestion.² The cardiotoxic effect must be similarly delayed; the myocardial necrosis in this case was only 12-24 hours old. The quality of the hepatic, renal, and cardiac damage appears to be essentially similar, although these organs are affected in decreasing order of severity. The presence of fatty degeneration in these organs, affecting both the necrotic and viable cells, points

to a gradual and cumulative toxic process and suggests that sublethal doses may cause considerable damage.

The recommended therapeutic dose of paracetamol is about 1 g and the minimum toxic dose may be as low as 6 g.² Paracetamol is being increasingly used instead of aspirin. It is not uncommon for double or quadruple doses of aspirin to be taken by a patient with, say, menstrual pain. It is questionable if similar doses of paracetamol should be taken with the same nonchalance. —I am, etc.,

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¹ Pimstone, B. L., and Uys, C. J., *South African Medical Journal*, 1968, 42, 557.

² Proudfoot, A. T., and Wright, N., *British Medical Journal*, 1970, 3, 557.

Control of Rabies

STR.—Dr. H. M. Davies's (31 July, p. 302) problem of dealing with ships' pets which can find their way ashore illegally was considered at length by the Committee of Inquiry on Rabies and is dealt with in Chapter 8 of our report.¹

The likelihood of a dog or cat escaping is even greater now than formerly owing to bow-opening container ships being used for coastwise traffic. The suggestion made in the letter to prohibit domestic animals from being carried in small ships would require international agreement and it is very doubtful if this could be achieved.

It was for this reason that the committee recommended (para. 8.5.) a widespread education and information programme at all ports to alert everyone associated with international maritime traffic to the danger of rabies. It is my own view that if this is done and the public co-operate with customs officers, police, and port health staffs in reporting illegal landings, and when an offence is committed the captain responsible for the dog or cat landing from his ship is prosecuted, we would soon find a stricter control of these animals on board ships. I suspect that in the past the powers dealing with control of pets on board ships have not been as strictly enforced as they could have been, and it is to be hoped that these powers will be taken much more seriously in future. —I am, etc.,

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¹ Committee of Inquiry on Rabies. *Final Report*. Cmd. 4696. London, H.M.S.O., 1971.

Psychogeriatric Care

STR.—Dr. T. Arie, in his thoughtful contribution to the planning of psychogeriatric services (17 July, p. 166), makes the case for the welfare accommodation of ambulant demented. Our experience in Bedfordshire, the first authority to have two purpose-built homes for the elderly mentally infirm, has led us to have increasing doubts about this type of provision.

By the time that residential care is sought the progress of the dementia is often so well advanced that placement in an ordinary welfare home is likely to be upsetting to the

other residents. Specialist homes were seen as a means of taking some of the pressure off the ordinary homes and also off the psychiatric and geriatric hospitals. They have undoubtedly achieved this aim, but it is questionable whether the residents are being cared for in the most advantageous manner. The weekly operational cost of these two specialist homes of 35 and 40 beds stands at £21 per resident. The figure of £11 quoted by Dr. Arie would refer to the average cost of ordinary welfare homes and would include the large 50+ units.

The experience of seven years has shown us that despite rigorous selection of cases for admission the homes will in the course of time have to carry a heavy burden of incontinence (frequently double incontinence), frailty (requiring a maximum staff help in movement, dressing, etc.), and incapacity (for example, requiring to be fed). The residents sleep in single or twin-bedded rooms and it is not surprising that with the resulting difficulties of supervising restless, confused, and frail patients there has been an unhappy record of fractured femurs in both homes. When the first home was opened it was not envisaged that we would be forced into accepting locked doors, geriatric chairs, and even, occasionally, cot sides. In no sense can these demented residents be said to be within the community and it is not easy to see in what fundamental way other than in scale of provision and expertise of patient management such a home differs from a hospital.

Apart from economic consideration, it is surely the state of patient management which should be our prime consideration. There is no doubt in my mind that whether within or without a hospital much of the arduous work of caring for these patients can be undertaken by care assistants, but I have been impressed by the need at all times for sound nursing judgement—the more so since these patients are frequently unable to express themselves.

If it were really the case that geriatricians and nurses with an interest in caring for these patients are not to be found then we might have to accept second-class service, but it seems to me that enthusiastic and dynamic medical and nursing teams in the field of geriatrics are more in evidence today than they have ever been before.

Perhaps sufficient experience of homes for the elderly mentally infirm now exists to justify a detailed inquiry by the Department of Health and Social Security as to their place in psychogeriatric provision. Meanwhile, it is a matter of concern that regional hospital boards can take refuge for hospital under-provision in this field while looking towards local authorities to multiply the provision of these specialist homes.—I am, etc.,

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STR.—As a psychiatrist working in very similar circumstances to Dr. I. Arie, I would like to comment on his paper (17 July, p. 166) and your leading article (24 July, p. 202) on psychogeriatric care.

I share Dr. Arie's assessment of the interest and education of the medical profession in the care of the elderly and of the beneficial change effected by joint (novel?) resources.