

the British Army, and the rest were their travelling dependants. They came from many different areas. In fact, a more mixed population in terms of their region of origin within the United Kingdom would be hard to imagine.—We are, etc.,

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Continuous Ventilation and Oedema

SIR,—We should like to record a patient suffering from severe myasthenia gravis who has required assisted ventilation for nine years using a Barnet Mk II ventilator. For the past five years she has required continuous controlled ventilation. A subatmospheric phase was not employed.

During the period of continuous ventilation she developed pitting oedema of the face and extremities. The oedema could not be attributed to cardiovascular, renal, or liver disease as her serum proteins, electrolytes, and osmolarity were within normal limits. Hitherto it was believed that the oedema was due in some way to the immobility of the patient. However, a mean intrathoracic pressure resulting from mechanical ventilation of the lungs which is continually maintained above that of atmospheric pressure may possibly cause oedema by two mechanisms.

Since 1947¹ it has been known that continuous pressure breathing causes an anti-diuresis and that a diuresis results when the intrathoracic pressure is lowered.² It was believed that these effects were mediated by changes in the size of the left atrium.³ It seems likely that adaptation to such changes would occur after very prolonged periods of time as has been suggested,⁴ and would not be operative in this case.

Another mechanism is that based upon the recent observations of Guyton.⁵ Guyton, using an implanted capsule technique, has produced evidence that the interstitial fluid pressure is subatmospheric, and that if the interstitial fluid pressure rises to atmospheric then there is a considerable increase in the mobility of the fluid in the tissue spaces, so that these spaces balloon outward to fill with fluid. This is the opposite of the compaction of the tissues which is associated with normal subatmospheric interstitial fluid pressure.

This appraisal suggested that if a subatmospheric expiratory phase were employed the mean intrathoracic pressure, the venous, and the capillary pressures would fall, so that the interstitial fluid pressure would return below that of atmosphere and the oedema disappear. The employment of a subatmospheric expiratory phase down to -10 cm. H_2O led to a gradual diminution of the oedema, so that after

6-8 weeks the patient now has no oedema of her hands and feet and can now wear rings last worn five years ago. When she was ventilated for 14 days without a subatmospheric phase the oedema rapidly reaccumulated.

It has not been possible because of vascular puncture difficulties to undertake haemodynamic studies so that the actual mechanism causing the oedema has not been elucidated.—We are, etc.,

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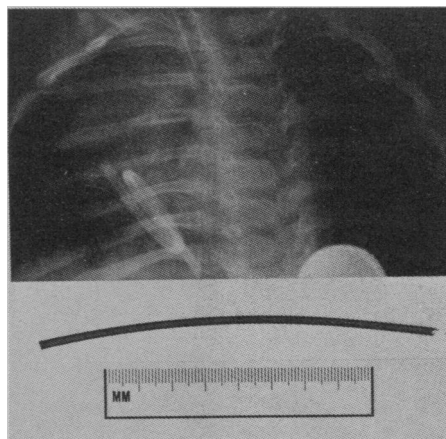
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Catheter Fragment in the Heart

SIR,—We read with interest Dr. J. H. N. Bett's letter (1 August, p. 287) concerning the removal of catheter fragments from the heart. On the same day a thirteen-month-old child (weight 9.56 kg.) was referred to the thoracic unit, the Hospital for Sick Children, with a portion of Silastic catheter in the heart.

The child was noted to have a thoracolumbar meningomyelocele at birth, and subsequently developed hydrocephalus, for which a Spitz-Holter valve had been inserted in the usual fashion. This had ceased to function, but during the operation for its removal a portion of the distal Silastic catheter became dislodged. The operative radiograph showed the detached portion to be lying within the cardiac silhouette, presumably in the right atrium.



The following day, with the child sedated, a cardiac catheter was introduced into the right long saphenous vein under local anaesthesia, and passed to the right

atrium. By viewing the child in various positions it was then possible to confirm that both the cardiac catheter and the fragment of Silastic catheter lay within the right atrium. A catheter system which allows a variable degree of flexion of the catheter tip was then introduced. (The Muller-U.S.C.I. guide system is routinely used in this department.) The catheter tip was then hooked and the loop of Silastic catheter caught in it. The whole assembly was withdrawn, but the Silastic catheter could only be pulled to the external iliac vein, this limitation being due to the relative diameters of the vein and the created hook.

The femoral vein immediately above the sapheno-femoral junction was dissected out through the original incision. The smallest Fogarty catheter available (5F) was then introduced into the femoral vein and passed up until its tip lay alongside the Silastic catheter. With the balloon partly inflated the Silastic catheter was then drawn out of the femoral vein. The venotomy was sutured. There were no complications and the procedure was tolerated well by the child.

It is felt that a catheter assembly which makes it possible deliberately to vary the shape of the catheter tip can at times be used successfully in the location and removal of foreign bodies, especially catheter fragments from within the heart, without recourse to thoracotomy.

We would like to thank Mr. James Dickson for permission to report this case.

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Sleeping Pills

SIR,—The increasing body of evidence that hypnotics cause quite long-term alteration of sleep pattern (8 August, pp. 296 and 310), as well as the mounting wave of gross abuse of barbiturates by young people, must surely raise the question whether it is not time for all barbiturates to be classed under the D.D.A. This may seem a rather sweeping suggestion, but now the only real indications for the use of barbiturates, except very occasionally for the extremely disturbed patient, seem to be in anaesthesia and the small doses of amylobarbitone used in conjunction with high-dosage chlorpromazine in the intensive treatment of schizophrenia. I know many neurologists still use phenobarbitone in epilepsy, but most psychiatrists are painfully aware of the dopiness, paradoxical irritability, and behaviour disturbances that are so common in patients on long-term medication with phenobarbitone and its derivatives.

It is neither logical nor desirable to use hypnotics to damp down insomnia caused by pain, cough, depression, anxiety, or even noise in hospital, instead of tackling the causes. Psychiatric units are among the worst offenders in creating and perpetuating dependence on hypnotics, but this really is not necessary. In my last year at my previous hospital I was the ward doctor for a busy short-term admission unit with a patient population liable to range from 16-year-old psychopaths to 86-year-old senile

dements, but with a heavy loading of middle-aged women, most of whom were in the habit of taking hypnotics. Thanks to the unfailing support of the nursing staff, I found it was possible to get all the patients off hypnotics in a quite short time, so that instead of many patients going home still taking 400 mg. of sodium amylobarbitone at night, it became a matter of concern if more than one patient needed a dose of chloral. If the night report showed three or more having chloral in one night, there would be an inquiry. The method of withdrawal was quite simple: chloral hydrate was the only hypnotic available on the ward so there could be no question of hoarding, and the night nurse gave out hypnotics only if patients were still awake when she did a round half an hour after they had gone to bed.

I wonder if others are finding it almost impossible to wean patients off Mandrax (methaqualone hydrochloride and diphenhydramine hydrochloride) without admission to hospital? I find that once people have been taking it for any length of time they cannot be persuaded to try to sleep without it even for one night.—I am, etc.,

PAULA H. GOSLING.

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Infection in the Nursery

SIR,—I would like to add to your leading article (1 August, p. 235).

Following Gillespie's¹ work on Naseptin cream and hexachlorophane powder for prevention of neonatal staphylococcal infection, which you quote, we tested the method under controlled conditions² and we have employed it routinely ever since. We have no evidence of increase in Gram-negative infection.

Neonatal infections in U.C.H. nurseries during one year after eight years' prophylactic treatment with hexachlorophane powder

	Staph. aureus Isolated	Gram-negative Bacilli Isolated
Sticky eye	17	2
"Spots"	15	3
Sticky umbilicus ..	3	6
Paronychia	1	0
Circumcision .. .	0	1
? Urinary infection ..	0	5
Total isolations ..	36	17
Total infections ..	49	
(all minor)		
Infants at risk .. .	1,289	

I think Gram-negatives are likely to increase only if hexachlorophane is used as an emulsion or by bathing; they do not survive well in dry conditions.

It would be a pity if this valuable prophylactic treatment were to fall into disrepute because of the application of hexachlorophane in an inappropriate form.—I am, etc.,

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Psychotherapy of the Dying Patient

SIR,—Professor W. A. Cramond's humane and insightful article on the psychotherapy of the dying patient (15 August, p. 389) comes as a very timely reminder that there exists a great area of failure in medical practice as a whole. It has been said that just as sex was the taboo subject of the Victorian age, death is the equally taboo subject of our age. I wonder if a question on this subject has ever been set in any medical qualifying examination in this country? I wonder how many doctors are themselves emotionally capable of facing the facts of life with Professor Cramond's realism and compassion? Frequently one meets cases of heroic measures being used to resuscitate elderly patients who have no wish to live, with the result that the mental suffering inevitable in the dying process is prolonged.

I remember one patient whose pelvis was riddled with secondary carcinoma being put on anticoagulants because she developed a venous thrombosis—and this in a London teaching hospital. When I offered a bed in a small general-practitioner unit one could hear the consultant's deep sigh of relief to be relieved of the emotional burden of the dying patient.

Professor Cramond's article should be compulsory reading for all medical students and discussion about the many aspects of handling this subject should be part of every medical student's experience.—I am, etc.,

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F. E. S. HATFIELD.

SIR,—We should all be grateful to Professor W. A. Cramond for his excellent paper on the psychological management of the patient who is dying (15 August, p. 389). He rightly states that the emotional needs of such people have been largely ignored by the medical profession, and my experience of about five years in hospital practice certainly confirms this view. In general practice, the situation is probably not so bad, because general practitioners know their patients better, don't they?

In discussing the sparseness of the literature on this subject, Professor Cramond omitted to mention papers by Dr. Cicely Saunders,¹ which are important and easily readable contributions to the subject. Both her papers and Professor Cramond's are full of practical issues and how to deal with them, based on sound common sense and sensitive observation of the reactions of patients and those who attend them to the challenge of death. Surely it is time that we recognized that our conspiracy of silence with which we surround our dying patients is often designed to protect us and not them from the trauma of the situation. This may result in increased mental suffering for the patient, who is probably aware of the diagnosis, owing to an estrangement from his closest relatives and the doctors he was once freely able to confide in.

In my experience, which has varied from the tense situations encountered in a cardiac monitoring unit and a renal haemodialysis unit to the more prolonged but just as taxing problem encountered in neurology, psychiatry, and geriatrics, I am aware of the

many patients who were skilfully "managed", but probably psychologically neglected. We say that we always try to ease suffering, but in our concern to be doing "everything that can be done" we often spend all our limited energies and time on ensuring that the Hb, blood sugar, and electrolytes are "satisfactory". Surely that time could be better spent (when the issue is in no doubt) listening to our patients' fears and fantasies, and relieving them if possible.

We must not allow our skill in medical techniques and concern over the body to oust our compassion for the state of the mind and spirit. If the papers of Professor Cramond and Dr. Saunders were more widely read—for example, by housemen, nurses, and teachers of medical and nursing students—then this ideal could be realized.—I am, etc.,

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Cardiac Arrest and Bone Cement

SIR,—I was interested to read about the two patients who had cardiac arrest after the use of bone cement, as reported by Dr. J. N. Powell and others (8 August, p. 326), and I would like to make some comments.

It is well known that during total hip replacement insertion of cement into the acetabulum, and more especially the femur, results in a temporary fall in blood pressure lasting about 30 seconds. The fall may be as much as 20 or 30 points, and in my experience of about 200 total hip replacements it occurred in almost all patients, and there have been no cardiac arrests. I have had one patient who died on the operating table immediately following release of the tourniquet after a knee replacement in which cement was used. Death was proved to be due to massive fat embolism. I know of one or two other such instances and there may well be more.

Unless one thinks of the possibility of fat embolus, the diagnosis may well be missed, especially if the patient is recovering from anaesthesia. It may well be that some of the reported cases of cardiac arrest are, in fact, due to fat embolus.—I am, etc.,

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SIR,—I was interested in the paper about cardiac arrest associated with bone cement (8 August, p. 326). During a period of orthopaedic duties some years ago, I was struck by the difficulty experienced in packing bone cement into the femoral shaft after reaming. It was obvious that pressure in the shaft must be raised by this procedure unless release holes were drilled through the shaft into the reamed out medulla at a distance approximating to the end of the prosthesis. By drilling two such holes, packing becomes much easier since air, blood, and medullary content escape through the holes. This should also minimize absorption by reducing pressure and decreasing the