OLD FOLK IN WET BEDS*

BY

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Last summer I asked one of the leading English geriatricians what views he held on the problem of incontinence. His reply was, "We don't have any problem with incontinence"; but later, when I asked one of his ward sisters how many of her patients wet their beds, she looked around the 32 beds and counted them. "Eight," she said. But they had no problem with incontinence, and by the same standards nor have many of us.

Before the visiting physician does his round there is a period of intense activity in which the staff see that all is shipshape. If he turns the bedclothes down and finds a wet patch he pretends he has not noticed; the sister hastily covers it up again, and when he has gone she may have something to say to the junior nurse. How different if it had been blood; then they would have been all eyes and interest. But blood would have posed only a few problems in diagnosis, its treatment would have been fairly simple, and the prognosis might have been quite good. But a patch of urine cannot be readily explained—its treatment has proved beyond most of us; and, as to its significance, it will make all the difference between social acceptance and rejection with all that that involves in prolonged hospital care and expense. One is respectable and the other is not, but I have no doubt which is the more important.

Causes of Incontinence

It will not be much good looking up "Incontinence" in the textbooks, because they are written by people who do not have any problem with it. You will find in the books that hemiplegias and paralysis agitans are causes of incontinence; but they are not—witness the number of victims of both who are walking the streets without it. A hemiplegia will cause a temporary loss of bladder control just as the operation of unilateral chordotomy does; but it should pass off in a few days, and if it does not either our diagnosis or our management may be at fault. It is the same with Parkinson's disease, with all respect to Parkinson himself, who fell into the error of saying it did. Why should the bladder be upset by a disease of a section of the nervous system that plays no part in its innervation? It is the same with many of the local conditions that have been blamed for causing incontinence—cystitis and caruncles, for instance. How can a little fleshy outgrowth at the urethral opening make any difference to the functioning of a muscle far removed from it? And as to cystitis, it makes you hurry up, but it does not make you wet the bed; again, witness the majority of its victims who do not.

Brocklehurst (1951) wrote a monograph on incontinence. He had to admit that most cases were inexplicable, but suggested that many were connected with a contracted bladder, and he treated them by progressive stretching under cystometric control. But why does the bladder become contracted? Is it the cause of incontinence or its result, the persistently empty bladder becoming contracted? Or is it a case of the

"local anatomical changes" or the "senile degeneration of the bladder" which are alleged by some to be the cause of incontinence but which have never been seen by any pathologist?

I asked most of the geriatricians I met overseas what they thought about urinary incontinence, and most of them spoke about "carelessness" or "laziness," or, to use the expression of one of them, "not enough in the top story." Yet these old women who lie in wet beds unabashed are the very ones who will pull down their nighties hastily if you happen to uncover them, which is not suggestive of carelessness. And as to their top stories, they may be confused at times but they have their reasoning powers in plenty for most ordinary activities. Perhaps Dr. Ewart, of the Vasa Hospital in Göteborg, came nearer to the truth when he added that besides simple carelessness some cases of incontinence might be a reaction against growing old. "Let's be children again," as he said. I have long thought that there might be something in this, that it might be an end-result of the possible urge of the old to retrace the steps of childhood, first giving up walking, then having to be fed, and finally ending up by resuming a foetal position curled up, with the bed as the uterus and urine as the liquor amnii.

Treatment is naturally based on the particular theory of causation. The first attack is on the infection, if present, combined with an attempt to restore mobility; and if this fails, as it often does, recourse may be had to stretching the bladder or, empirically, to injections of testosterone. The miserable remainder who do not respond to any of these methods of treatment are usually relegated to long-stay annexes, where they will remain, making exorbitant demands on the nursing staff, a burden to everyone for the rest of their lives. But it is my belief that mental decay, senile or otherwise, plays practically no part in the genesis of incontinence. Of course there are some profoundly demented psychotics in geriatric wards as well as in others whose excretory habits are positively antisocial, but they are totally different, as anyone who has to deal with them will recognize, from the quiet apathetic old folk who simply lie in wet beds.

Classification

At this point I had better try to offer a classification of the different kinds of urinary incontinence by known causes, and the first thing to do is to differentiate between true and apparent incontinence. In the apparent group the first are those cases of precipitancy that cannot be satisfied in time. They are common in hospital practice, with immobility in bed and a lack of sympathetic and adequate nursing care as crucial factors, and with precipitancy, usually associated with infection, as no more than an aggravating one. Next are those conditions associated with polyuria, and one that is frequently overlooked is that which arises from nephrosclerosis. The kidney can keep down the level of nitrogenous waste products in the blood only by excreting increased quantities of unconcentrated urine, and it does this by day and night. These patients, if given hypnotics and not awakened during the night, may easily become the victims of an incontinence that is genuine but artificially induced. Another kind of incontinence is that which is associated with the supine position. "I simply could not urinate lying down," wrote the victim of a coronary thrombosis in

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Disabilities (1952), "It took me a week to learn the trick, and I advise everyone over 50 to practise it." Some old men are not as lucky as he was. They get out of bed to try and an officious nurse thinks they are wandering and gets them back. The next thing is that the bed-boards go up and they are found next morning reeking of paraldehyde in a wet bed. That is why I always regard bed-boards with the most profound suspicion.

The causes of true incontinence of urine are more or less as follows; (1) Neurogenic: sensory, as in tabes; motor, as in bilateral upper motor lesions of whatever cause; combined, in paraplegia and cauda equina lesions. (2) Traumatic: in vesico-vaginal fistula. (3) Bladder-neck disturbance: displacement, causing stress incontinence; obstruction, by prostate enlargement or by constipation (and even pessaries). (4) Dementia, when profound.

Obviously this classification does not embrace all cases, and it remains to identify another, *x*, the unknown factor.

Stress and Conflict

What I believe may be the answer to this problem came to me as I was reading Sargent's (1957) fascinating book *Battle for the Mind*.

"Dogs, like human beings, break down when stresses or conflicts become too great for their nervous systems to master. At the point of breakdown their behaviour begins to vary from that normally characteristic of their inherited temperamental type and previous conditioning. The amount of stress or conflict that a dog can master without breaking down varies with its physical condition. A lowering of resistance can be brought about by such things as fatigue, fevers, drugs, and glandular changes. When the nervous system has been stimulated 'trans-marginally' (that is to say beyond its capacity to respond normally) for long periods, a dog's responses eventually become inhibited, whatever its temperamental type may be. . . . This transmarginal inhibition is protective and results in altered behaviour. Three distinguishable phases of increasingly abnormal behaviour occur: (a) The so-called 'equivalent' phase in which the brain gives the same response to both strong and weak stimuli. (b) The so-called 'paradoxical' phase in which the brain responds more actively to weak stimuli than to strong. (c) The so-called 'ultraparadoxical' phase in which conditioned responses and behaviour patterns turn from positive to negative or from negative to positive."

I thought of my incontinent old patients in the light of what I had read. "The older the person the less easily can he improvise new conditioned responses to such changes in environment." Could it be that in old age wetting the bed was one of the responses to break down under stress? What of those who repeatedly wet the bed, whose sheet is no sooner changed than they do it again? It might be that they are in a paradoxical phase, when their brains respond more readily to a weak stimulus from a filling bladder than to a strong one. I thought of Mrs. B, an intelligent and co-operative woman of over 80 who had been working hard at her physical rehabilitation after a minor cerebellar thrombosis. Her balance was affected, and she fell and broke her hip. When she came back from having it pinned she was a completely changed character. She now took no interest in her recovery. When she was lifted on to a bed-pan she made no attempt to use it,

but as soon as she was back in bed she would wet it, and would strike out at the nurses who came to attend to her. This may look to some like dementia, but to me it seemed a perfect example of the ultraparadoxical phase in which her response to the bed-pan had turned from positive to negative and to the nurses from negative to positive. How else could such a reversal of temperament be explained? "One set of behaviour patterns in man can be temporarily replaced by another that altogether contradicts it; not by persuasive indoctrination alone but also by imposing intolerable strains on a normally functioning brain."

Sargent goes on in his book to describe the application of stress to masses under religious pressure and to individuals as a deliberate means of inducing confession and political conversion. This may seem a long way from our treatment of an old person at home or a patient in hospital. But is it? When she is independent an old woman, or an old man, is treated with at least outward respect. She performs every day countless acts as she has performed them for years, so that they have become ingrained into her whole system of life. She dresses in the morning in the clothes she chooses for the day; she sits down to her meals and helps herself to what she wants. She visits the lavatory, shuts the door, and locks it. She takes a couple of aspirins for her rheumatism; and so on through the day till she decides that it is time to go to bed, when she undresses with all the routine of washing and cleaning her dentures and finally putting out the light; simple repetitive acts backed by years of custom and convenience, but none the less the acts on which the whole pattern of life is built.

How different when she comes into hospital. No longer a person of consequence, she is ordered about by a chit of a nurse. She may be admitted into a single ward ("one method of altering a prisoner's normal conditioning is solitary confinement in the early stages of the examination"). She finds herself in an utterly strange environment among strange people. Strange men come into her room, talk to one another at the end of her bed about her, and leave without any explanation. She wonders if they are going to operate. Is her illness serious? Which of the nurses is going to look after her? and what is her name? (Pavlov could produce a breakdown by anomalies in the conditioning signals given. "A hungry dog became uncertain what would happen next and how to face these confused circumstances. This could disrupt its normal nervous stability . . . just as happens with human beings.")

"Nurse, nurse, may I have a bed-pan?" "You'll have to wait a minute. I'm busy. We'll be bringing them round in a minute." A minute becomes two, five, and then . . . (Pavlov found that a powerful way of producing a rupture in higher nervous activity was "to increase the time between the giving of the signal and the arrival of food. He found, in fact, that the dogs' brains revolted against any abnormal prolongation of waiting under stress. Breakdown occurred when a dog had to exert very strong or very protracted inhibition.")

She is ill. She is in pain. She would like an aspirin; but the nurse has taken hers away and she may not have one till sister brings it to her. (A fourth way of producing a breakdown was to tamper with a dog's physical condition by subjecting it to " . . . gastro-intestinal

disorders, fever, or by disturbing its glandular balance.") And so the patient's treatment in hospital goes on, with strict conformation to a new and largely incomprehensible routine that bears no relation to the ingrained pattern of life at home. Meals are taken sitting uncomfortably in bed, there is no friendly face of the family to be seen, lights are still burning after one would like to switch them off. Everything builds up to reinforce one or other of the methods of artificial reversal of behaviour patterns which Pavlov designed deliberately and which we apply all unconsciously. One final quotation, "A further means of altering a prisoner's normal conditioning, especially one who has hitherto been a person of authority or consequence, is to make him wear old and ill-fitting prison clothes with trousers which he must support with his own hands, and to leave him unshaven. Such social degradation can prove most effective." Surely this might have been written about hospital pyjamas with their 40-in. cords to go round a 38-in. waist. And is not being fed a form of social degradation?

That, I believe is x, the unknown fifth heading in my classification of the causes of wet beds, alone principally, although, of course, there may be coexisting abnormalities to which geriatricians have hitherto attached an importance that I believe to be unjustified. That emotional breakdown can indeed cause incontinence was shown by the experience of some prisoners-of-war in the Korean campaign. "Emotional isolation alone has a profound effect on most normal people. When a man is kept in confinement without trial and without hope he will, after a few weeks, become profoundly depressed. Life ceases to have any significance for one who has been debarred from every activity and deprived of every relationship which gave it meaning. Usually the prisoner becomes indifferent to his surroundings, apathetic, dishevelled, and incontinent" (Storr, 1961). Is that so very far removed from our geriatric wards? It may be much nearer than we would like to think.

Environmental Change

An objection against hospital management being the principal cause of incontinence may be that it is not entirely a hospital problem, that it often develops in the home—witness the demands for institutional care on account of it. The fact is that a patient does not have to go into hospital to be handled in a psychologically upsetting way, that very many old folk are needlessly babied, and hence humiliated in their own homes, and that we have not found a way of making the transition from employment to retirement, from activity to any degree of dependence smooth and gradual. All these things must tell and on occasion produce a breakdown in lifelong habits. Incontinence is very much commoner in hospitals and old folks homes than elsewhere, and I have found it relatively uncommon in communities of the same age as our hospital incontinentals but living an independent life on their own. We need to know a great deal more about the incidence of incontinence in different groups, and to see if it can be correlated with the kind of care they receive and with such things as the retention around them of their own furniture and possessions. Several authors have commented on the way incontinence may follow a change in environment, usually from home to hospital but sometimes the other way—surely a further

indication, if one were needed, that it is not dementia that is responsible.

Change in Outlook

If I am right the contracted bladder is the result of its never being allowed to become full because the equivalent or paradoxical phase will not let it. So we shall not treat incontinence with tidal drainage, antibiotics, and so on. What, then, shall we do? For the established condition I doubt if there is much we can do beyond follow the advice of one experienced ward sister with whom I discussed it. "You've got to start house-training them all over again," she said.

But of course the main thing is prevention, and here I believe we could do a great deal by bringing the hospital environment into line with the individual instead of expecting the individual, at an age when he is least capable of it, to adapt himself to a preordained institutional routine which, if it is looked at dispassionately, often has little to recommend it. What we should try to do is to make this transition from independence to dependence a gradual one and not too rigid.

In the light of what we know about isolation (and isolation at home is one of the disasters of old age) I doubt very much the advisability of admitting a geriatric patient to a single ward. A two- or four-bedded one would avoid the risks of solitary confinement and allow the newcomer to profit by the experience of his fellows. Secondly, the patient must be made welcome and have someone who will take an interest in him, a sort of daughter substitute (and this is where frequent changes of nursing staff, though inevitable, are unfortunate). But at least real daughters can be more encouraged by avoiding restrictive visiting hours. Near relatives, especially if they are a part of the accepted home background, should be encouraged to come and go when they like, subject only to sister's permission, so far as is possible.

We need a drastic reorientation in our whole outlook on hospital care generally, and particularly in the admission ward. We should have a variety of available wraps; and if we must provide pyjamas they should at least be big enough, but ordinary clothes should be worn whenever possible, and proper shoes. We need day-rooms that cannot be appropriated as supplementary wards, dining-rooms in which all patients who can would be expected to take their meals sitting up at tables unless bed was prescribed, and not merely used as a means of keeping the patient quietly out of the way. They should have the food brought to them in dishes and should help themselves to what they want. In the same way they might be encouraged to help themselves to some of their own medicines instead of having to rely on someone else. To leave half a dozen aspirins in a pot by the bedside would be quite adequate control for this kind of drug.

We should need to awaken the hospital staff at all levels to the needs of the elderly patient, which are no less their own than the needs of the small child. They must have help when they need it and not when they do not. This applies particularly to feeding. No patient must be humiliated, and what can be more humiliating than to be fed when you are capable of feeding yourself? The very worst thing a nurse can do is to keep a patient waiting for a bed-pan. In their own way doctors are as great offenders. How often do you see them conduct a conversation out of the

patient's earshot and then pass on? If a patient is worth considering at all he is worth a moment's personal approach. For many of them we have not much to offer except friendship and a kindly word; but if we used these powerful weapons oftener and to greater advantage we should be in a better position to ban the barbiturates and take away the cot sides. Finally, we must regard a wet bed as a challenge. It must not be accepted by the nursing staff as an objectionable trait in a senile patient. It should be reported to the doctor, and the first question he ought to ask himself is, "What have we done wrong?"

Of course not all cases of urinary incontinence have anything to do with Pavlovian psychology: it is only a theory as yet that any of them have. But I do believe that the application of Pavlov's findings to the practice of geriatrics provides a reasonable explanation for what is otherwise quite inexplicable. It gives us a positive approach instead of the blind acceptance of "senility" about which we can do nothing. It may even cause us to look at our own behaviour and accepted methods with a more critical eye and sometimes to replace antibiotics, tidal drainage, and hormones with vegetable dishes, pretty nighties, and a kind word.

Summary and Conclusions

Currently accepted views on the cause of urinary incontinence, with senile dementia as the most important factor, are questioned.

Pavlov's concepts of psychological breakdown under stress seem to provide a reasonable explanation for many cases of incontinence in the elderly. On this view a major role should be ascribed to the breakdown of a lifetime's behaviour patterns.

A more positive approach is indicated, and a modification of institutional routine to ease the transition from independence to dependence might help to prevent urinary incontinence.

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"In Ethiopia, Iran, Iraq, and Libya school feeding programmes are being carried out with F.A.O., W.H.O., and U.N.I.C.E.F. assistance. They involve U.N.I.C.E.F. milk and sometimes capsules of vitamins A and D and may be supplemented by local foods to provide the children with a mid-morning snack destined to supply the nutrients missing in their home diet, in which protein is the main deficiency. In Ethiopia, by mid-1962, 90,000 school children and 10,000 pre-school children will be receiving milk and vitamin capsules and in many instances local supplementary foods as well. There will be 155 school gardens. Approximately 500 teachers will have received training at special summer training courses in school gardening, nutrition education, and related subjects for a period of two years. Over 60 teachers will have had a course in home economics, child care, and nutrition; 45 will be assigned to schools to be equipped with simple kitchen and home-making equipment. Books and pamphlets have been produced on home development, nutrition, health, etc., and distributed widely to schools. An F.A.O. expert and a 'bilateral' adviser in home economics provide advice and guidance. The continuing aim of the government is to encourage better dietary habits through increased use of locally produced protein-rich foods." (F.A.O. Information Letter 1, 1962.)

PROGRESSIVE PATIENT CARE

A conference on Progressive Patient Care was held at the Medical School, University of Birmingham, on June 16 and 17. It was sponsored by the Birmingham Regional Hospital Board and was attended by over 300 representatives of senior medical, nursing, and administrative staff from Britain and abroad. The chair was taken successively by Sir ARTHUR THOMSON (Birmingham), Sir ROBERT AITKEN (Birmingham), and Dr. A. BEAUCHAMP (Birmingham).

American Experiences

Dr. E. J. THOMS (Manchester, Connecticut), one of the originators of the concept, defined progressive patient care as the classification of the patient based on medical needs. There were five basic elements, one being essentially outside the hospital. The first was the special care or intensive treatment unit for the critically ill, which might take up 10% of the hospital beds, though there was a need for flexibility. The basic unit was six beds surrounding a centralized nursing area where equipment, drugs, dressings, etc., were readily available to the nurse, together with some single-bed cubicles. Only patients requiring continuous skilled nursing were admitted, and they were transferred as soon as the danger was over to the intermediate care unit. This would normally cater for 50% or more of the patients entering hospital, in other words the majority of acute illnesses normally dealt with in a general ward. But there was an important group, at least 20% of the total, who did not require the nursing service of an acute ward, and for them hotel-type accommodation with their own canteen, lounges, etc., could be provided. Patients in this self-care unit could dress in their ordinary clothes if necessary, could take themselves to x-ray and pathological departments, and could have unlimited visiting. The unit should also serve as a place of instruction for the patient and his family in the elements of therapeutics, diet, physiotherapy, and the like.

The fourth unit—for continuation care—was devoted to the 6% of patients whose illness was likely to last longer than a month, and where attention could be paid to longer-term rehabilitation. The fifth element of home care brought the public health services operating outside the hospitals into contact with the patient. The setting up of such a comprehensive scheme of patient care was not to be undertaken lightly, and a very careful preliminary classification study, with agreed criteria for the different units, was essential. Administration should be undertaken by small committees rather than by individuals.

Dr. E. T. THOMPSON (Washington, D.C.) said that the U.S. Department of Health, Education, and Welfare had given their blessing to progressive patient care. There was already a large literature on the subject and in five years over 400 hospitals in the United States had developed intensive care units. He predicted that half the hospitals in the continent would be converted to progressive patient care by 1965; any hospital that did not have progressive patient care by 1970 would be obsolete. Objections, and there had been many, were quickly dispelled by talking to patients.

Some of the lessons learnt at Manchester were discussed by Dr. H. J. LOCKWARD (Manchester, Connecticut). He said that it was important to remember that each hospital must work out its own scheme in relation to its needs and the type of population it serves. Fluctuation in numbers in the different units was one of the main problems, so that flexibility was essential. For instance they had found it possible to open or close one intensive care unit in 24 hours; under-utilization of personnel and overloading should be avoided. Such details as patient classification, automatic replacement of nursing equipment, telephonic communication, and movement of patients must be worked out, and any hospital contemplating progressive patient care would be well advised to run a small pilot scheme initially.