

surgery or outpatient department tends to exaggerate her improvement.

It seems true that only those cases where the abnormality follows an over-enthusiastic repair or incorrectly sutured episiotomy and a very few others where there is a distinct, anatomical defect, will be successfully treated by surgery. In all other cases, after interview and when abnormality has been excluded—if necessary under general anaesthesia—an interview should be sought with the husband. He may be unbelievably ignorant about sexual affairs, including anatomy. He may have premature ejaculation and this may be the cause of apareunia, and the wife, out of ignorance or loyalty or because she has been told the fault is hers, accepts this. Also, if he very clearly will not co-operate in treating the problem nothing can be done, apart from clarifying the situation to them. To involve the husband in the treatment will ensure that any advice given to the woman will be correctly related to her husband. A three-cornered discussion and reassurance about the commonness of the complaint and the excellence of prognosis may lessen anxiety and even be all that is required in the way of treatment.

VAGINISMUS

Dilators can be very successful in the treatment of vaginismus. After the problem has been fully explained the patient is given rectal or vaginal dilators. The former are preferable in severe cases where it may be difficult to insert the smallest vaginal dilators. The patient, or her husband under her direction, can use these until she can readily accept a large dilator. It should be explained that their function is to give confidence and not forcefully to dilate a small vagina; until a large dilator can be accepted there should be no attempt at penetration, and indeed it is better expressly forbidden.

Unfortunately, patients with vaginismus are often treated like those with dysmenorrhoea and menorrhagia. They are examined under anaesthesia; they may then be issued

with dilators and asked to report to an outpatient clinic in a month or more. If the first attempt to use the dilators fails, the month has been lost and the patient confirmed in her view that the condition is incurable. A weekly attendance at the outpatient clinic is the longest acceptable interval consistent with most gynaecologists' weekly timetable.

FAILURE OF LUBRICATION

In other cases of dyspareunia where there is no physical abnormality the elementary point that pain or discomfort is normal when there is no lubrication from excitation may have to be explained. The husband and wife should be told that the woman should completely control the technique so that there is no pain and maximal arousal. The sexual habits of different groups and individuals must be taken into account in discussing this. A small group of people are extraordinarily ignorant about these matters and have failed to learn from experience, because of a failure to communicate with each other. Quite often there is also limited sexual drive in these marriages, though this may not be an entirely primary cause but may be induced by the dyspareunia.

Fear of pregnancy may cause failure of lubrication with increasing dyspareunia, and the remedy is clear. Coitus interruptus, or a mechanical method not acceptable to the woman, may result in frequent frustration with resultant dryness and pain. Sensitivity to rubber or creams and jellies will be apparent from the history.

OTHER FACTORS

Some patients will require specialized psychiatric help in dealing with the whole problem. Where the problem is a basic misalliance dyspareunia can be normal and expected, and an investigative or surgical approach will make no useful contribution. In addition, it cannot be assumed that the patient will have full insight into the cause of her complaint.

Clinical Problems

Management of Enuresis

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Summary

In 144 enuretic children at four Southwark school health service clinics a good measure of success was achieved by sympathetic handling alone. Most of the remaining patients responded to a buzzer; nevertheless, its use needs to be carefully presented and supervised. The use of drugs is questioned.

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Introduction.

The treatment of nocturnal enuresis in children is by no means uniform. The methods used vary from leaving the child "to grow out of it" to drug therapy, with or without the use of conditioning apparatus. The following is an account of successful management without the use of drugs.

Patients

The children were treated at four special investigation school clinics of the London Borough of Southwark. The subjects discussed in this survey consisted of all enuretic children seen over the four-year period 1965-9 who were wet at least three times a week and who attended the clinics on two or more

occasions. These totalled 170, but for reasons given below the analysis is restricted to 144.

The ages of the children cover the wide range to be expected in school clinics (Table I). There were 93 boys and 51 girls. In 117 children the enuresis was of lifelong duration and in 27 was of the onset type. Sixty-four had been previously treated unsuccessfully for enuresis elsewhere by a variety of methods, including antidepressants, dextroamphetamine, and a buzzer; two had attended child guidance units.

TABLE I—Age Distribution of 144 Patients

Age in years	4	5	6	7	8	9	10	11	12	13	14	15
No. of children	1	21	13	25	25	21	15	7	7	7	1	1

Six girls were referred to their family practitioners as urine analysis showed bacteriuria and pyuria; four of them had daytime wetting. A further five children were referred for miscellaneous reasons, and 15 who were emotionally disturbed were referred to child guidance units. Thus of an initial 170 children sent to us on account of enuresis, 144 were treated entirely at the clinics. Of these, 18 (12.4% of the total) failed to keep up a regular attendance, leaving 126 children who could be properly assessed for efficacy of treatment.

Procedure

The staff at each clinic consists of the doctor, the social worker, and the nurse. All the patients were seen by me throughout. At the initial visit a comprehensive history, which includes the social situation, is taken from the parent. A physical examination is carried out and a specimen of urine sent for laboratory examination. A school report is requested and in some cases an educational psychologist's assessment. In the case of children under 6 years with a normal urine analysis a second visit is arranged six months later. Otherwise children are seen three-weekly until dryness is attained. This is defined as not more than one wet night a month. The child is then seen at intervals of two to three months until he has been dry for six months, when he is discharged. For the purposes of this study later follow-ups were also carried out.

Treatment

ADVICE AND ENCOURAGEMENT

Advice to Parents.—At the first visit the doctor explains that the child wets in his sleep, but as he does not know that he is doing so it is unreasonable to scold or punish him for wetting and to reward him for being dry. Parents are advised to greet the announcement of a dry bed in a pleasant but matter of fact way. They should not comment on wet beds unless the child draws attention to them. Parents of young children are told that one out of every ten between the ages of 5 and 6 is not yet dry at night. The parents are advised to stop "lifting" during the night and not to limit fluids. If children are being kept in napkins at night their immediate removal is strongly urged.

Approach to the Child.—When the child joins his parent the doctor engages him in friendly conversation and tells him that many other boys and girls attend because they wet their bed too, and that as he grows he will start to wake up in a nice dry bed more often—like his favourite footballer, pop star, etc. He is reassured that doctor has explained all this to his mummy and that neither of his parents will scold nor punish him for wetting in the future. The children are given weekly charts on which they are asked to indicate their dry ("grown up") mornings by a drawing. Children who do not like drawing are given little calendars and asked to put a ring

around the dry mornings. Young children seen at a six-month interval, however, are not given charts or calendars.

At the second visit, irrespective of the number of drawings or calendar rings, the child is praised for the quality of the drawing(s) or the care with which the day(s) have been ringed, and is awarded a "star." The dry night as such is not rewarded. Comment is made that as predicted the child has started to grow up quickly and that there will be more drawings next time. Total dryness may be immediate or there may be a gradual but steady increase in the number of dry nights. There is always some initial response. A pronounced improvement often occurs between the second and third visits, possibly associated with the child's responding to the pleasure with which his first drawing is greeted. Children are discharged when they have been dry for six months, but the parents are assured of their welcome should the child relapse. They are reminded that any child may have an occasional wet night and neither they nor their offspring need worry about this.

TREATMENT WITH BUZZER

Children aged 7 or over who are not making obvious progress on the measures outlined above, or who fail to maintain an initial improvement, are issued with a "buzzer." The model used is the Eastleigh, and the mats supplied with this are of the fine mesh type.

Before issuing a buzzer the principle on which it works is explained to the parent. Great emphasis is placed on the importance of one of the parents regularly getting up immediately the buzzer sounds, to ensure that the child awakens rapidly and follows the prescribed routine, and to help him with remaking the bed, as well as to give him companionship. We ask that one of the parents sleeps in the room with the child until it is obvious that he is confident and is waking rapidly when the buzzer sounds.

When satisfactory changes in sleeping arrangements have been arrived at the child is told that we have decided to help him become dry more quickly by lending him a friendly kind of clock that will call him with a loud buzz the moment he starts to wet. Mother and child are shown how to make up the bed for use with the buzzer, and we then rehearse the procedure to be followed. The child switches on the buzzer, lies on the made-up couch, and pretends to be asleep; when the buzzer is made to sound he gets off the couch, switches off the buzzer, and visits an imaginary lavatory. He helps to remake the bed, and the routine is repeated until he is adept. We stress that the more quickly he gets out of bed when the buzzer calls him the more quickly will he get to the stage of "beating the buzzer," and that the wet patch should never exceed the size of a saucer. The rule is made that only he is allowed to switch the buzzer on and off, the latter when he is out of bed. The clinic social worker or nurse visits the home within a week, sees the bed, and helps to resolve any difficulties that may have arisen.

The procedure has been gone into in detail since there is no doubt that, while the buzzer provides a highly effective mode of treatment, the presentation is all important. One hears objections to the buzzer on the grounds that it is regarded by the child as a punitive measure, or that he is frightened by it. We have never found either of these objections valid. We see children who have been given buzzers elsewhere but whose treatment had to be abandoned because they did not waken when the buzzer sounded. We find that many children do not wake up at the beginning of the treatment, but as the parent wakes the child, leaving the buzzer sounding until he is out of bed and can switch it off himself, the difficulty resolves itself after a few nights.

Results are encouraging from an early stage. As the child learns to get out of bed with increasing speed the bed is less and less wet, and he gets out of a dry bed in the mornings.

Relief from the heavy laundry load occurs long before the child is completely dry.

The buzzer is used until the child has had an unbroken run of 21 dry nights. It is then discontinued, but if in the immediate "post-buzzer" period the child should have two wet nights in any one week treatment is restarted until 21 dry nights in a row are again achieved. Parent and child are seen at three-weekly intervals. The buzzer is returned after three to four weeks' uninterrupted dryness without it, and the child discharged when he has maintained dryness without treatment for six months. The mother is advised that an occasional wet night should be treated very lightly, but that she should contact the clinic immediately should there be three wet nights in a week.

Results of Treatment

SIMPLE ADVICE AND ENCOURAGEMENT

Of the 126 regular attenders, 47 (37%) became dry. Long term follow-up results were not obtained on four children, but of the remainder, 4 were followed up for 6 to 12 months, 20 for one to two years, 11 for two to three years, 5 for three to four years, and 3 for four to four and a half years. One child relapsed but again responded on reattendance. It would seem that children becoming dry on simple measures remain so.

The time taken for improvement and for dryness to occur can be readily assessed from the charts. Where the young child was seen at the second visit after an interval of six months and he had become dry within that time the cure time has been assessed as six months. Where the mother stated that "he did not ever have another wet night after we last saw you" the time has been taken to be immediate. Twenty-five children showed an immediate improvement and only 10 took longer than a month to improve. Twelve children became dry immediately, 27 were dry by the end of two months, and 32 by the end of four months. Six young children took longer than six months to become dry, the longest time being 18 months, but there was gradual improvement throughout. A 12-year-old girl (not included in the 47) whose circumstances made other treatment impractical also took 18 months.

It is impossible to guess how many of these "encouragement only" children, most of whom had been wetting six or seven nights a week, would have shown comparable improvement had they not sought advice. One may surmise that particularly in those aged 8-14 years (20 of the 47) the attainment of dryness in a reasonable time is attributable to the alteration of the emotional climate. The time taken to become dry did not appear to be related to the age of the patient or to the preattendance frequency of wetting, but larger numbers would be needed to prove this.

Children who wet less often than three times a week, and are not therefore included in this report, invariably clear up on simple measures alone.

RESULTS OF BUZZER TREATMENT

Eighty-four patients were issued with buzzers. Most children showed a noticeable improvement after one to four weeks of buzzer usage. Seventy of the 76 who carried out the treatment exactly as instructed became dry, giving a cure rate of 92%. Of the remaining six, five improved considerably, but did not fulfil the standard for dryness even after 10 to 12 months' treatment. One child who showed only minimal improvement was referred to a paediatrician. The buzzer was withdrawn from two children because the mother could not co-operate, and six others failed to attend regularly. If these eight children are included in the total the cure rate is 83%. The time taken to attain dryness varied from one

week to one year (Table II). Twenty-four (32%) were dry after four weeks' treatment, 44 (58%) after eight weeks, and 61 (80%) after four months. Forsythe and Redmond¹ thought that if after 16 weeks on the buzzer the child was not dry the likelihood of cure was small. In this present survey 9 children (12%) did become dry after longer periods. The latter children were almost dry long before this—they would have been having one or two wet nights in three weeks. The frequency of wetting before using the buzzer did not appear to be related to the speed with which dryness was attained.

TABLE II—Time Taken to Become Dry in 70 Children Successfully Treated with the buzzer

	Weeks		Months				
	≤2	2-4	1-2	2-3	3-4	4-6	6-12
No. of children	8	16	20	7	10	5	4
Cumulative total cured %	11	32	58	67	80	87	92

Those who prescribe the buzzer are familiar with the fact that as the child begins to respond to treatment he awakens on his own to empty his bladder during the night. Relatively few children continue doing this; the great majority sleep through all night and wake dry in the morning.

Details to be Watched in Buzzer Usage.—It is essential that instructions should be carried out to the letter. The use of too thick a sheet under the child or the wearing of clothing below the waist will delay completion of the circuit, and the child will pass a large volume of urine before being woken. Inadequate tucking in of sheets and the use of too thin a sheet between the buzzer mats will lead to "false alarm" buzzing. Parents need to be reminded to replace the battery without delay should the intensity of the sound be decreasing. Buzzer ulcers² have not occurred in our patients. The fine mesh mats used ensure rapid passage of urine to the sheet separating them and the sounding of the alarm. The co-operation of the parent in waking the child ensures that the skin does not remain exposed to the destructive effects of electrolysis.³

RELAPSES OF BUZZER CURES

Of the 70 successfully treated children, 21 (30%) later relapsed. Thirteen relapses occurred within six months (the earliest being two months) and eight at intervals of from 7 to 19 months. Follow-up of at least six months is therefore necessary and ideally it should be two years. In this series 19 were followed up for 6 to 12 months, 25 for one to two years, 15 for two to three years, and 5 for three to four years. Of the 21 children who relapsed, 18 were re-treated with buzzers and again became dry. Five had a second relapse for which they were again treated, and two of these had a third relapse. The occurrence of relapse did not appear to bear any relationship to age, pretreatment frequency of wetting, or the time taken for dryness to be attained, but larger numbers would be needed to establish this. Apart from four cases in which relapse coincided with obvious events (hospital admission, moving house), there was no clear relationship between the occurrence of relapse and the existence of either acute or long-standing background situations.

Treatment of Multiple Bed-wetters in a Family

One can be optimistic about the treatment of multiple bed-wetters in a family. It has been found best to treat siblings one at a time to avoid an undesirable competitive element. Parents are encouraged and where necessary aided to buy extra beds, for separating wetters from a shared bed may

alone produce a dramatic cure. Siblings may or may not require the same form of treatment. In the present series 17 sib groups were treated, and of the 15 who attended regularly 12 complete groups became dry. In two groups one sib though much improved did not achieve cure.

Daytime Wetting and Soiling

Apart from children who were found to have urinary infections, 18 children wet to varying degrees during the day, and two soiled. We found that these symptoms disappeared as the nocturnal enuresis improved, except in one child, whom we referred to a paediatrician.

Social Worker Support

Serious background difficulties were present in 42 families, such as severe marital disharmony, financial problems, mental illness, poor housing, fatherless households, and "problem" families. In our clinics doctor and social worker co-operate closely. The importance of social support cannot be overstressed. It is obvious that easier relationships are established when the family is helped with its various problems by the same team. Though the parent brings the enuretic child to the clinic she has the opportunity of discussing her own difficulties not only with the doctor but also with the social worker, who may, in addition, visit the home. It is doubtful whether some parents could have co-operated in the treatment of the child were they not being simultaneously helped with their other difficulties.

Educational and Emotional Problems

Where school reports indicated educational difficulties an educational psychologist's assessment was obtained and remedial help instituted. The psychologist's report was the means, too, of uncovering emotional difficulties in some of the patients who were referred to child guidance units.

Discussion

Of 126 enuretic children regularly attending our clinics, 118 (93.7%) became dry—48 became dry on simple advice and encouragement alone and 78 were treated with a buzzer. Of the 76 who used the buzzer according to instructions, 70 (92%) became dry. Improvement on simple measures occurs in a reasonable time and is often dramatic. In this series only advice was given, but White¹ gave placebo lactose tablets in addition and achieved the high success rate of 50%, with an average attendance period of 5.8 months; she, too, found a very low incidence of relapse in children who were thus cured.

When simple measures do not suffice the use of a buzzer is highly successful. The co-operation of parents and child is readily forthcoming provided adequate explanation and supervision are given. Using the data given by Young⁵ in his summary of results in the reports of buzzer treatment, we found that there was an average success rate of 83% in 1,635 cases. Though the relapse rate is high, re-treatment again produces dryness. Our relapse rate was 30%. Turner and Young⁶ found that relapse after conditioning combined with administration of dextroamphetamine (75%) or methylamphetamine (43%) was much higher than after conditioning alone (31%), though the time taken to become dry was shorter when the drugs were used. Forsythe and Redmond¹ had a low relapse rate (6.5%) but their cure rate was also on the low side (66%).

The fact that some children respond readily to simple measures is not new.^{7,8} Such response and the low relapse

rate lead one to wonder whether enuresis in these children has a different pathogenesis from that in children needing further help.

The high rate of success obtained by simple measures and use of the buzzer make any other form of treatment unnecessary. Both, however, are considerably demanding of time. In addition, the buzzer requires supervision in the home. A safe reliable drug would, of course, be useful. The antidepressants which are so widely used at present do not, however, seem to answer this need. Improvement is often temporary when it occurs, with relapse when the drug is withdrawn. The published results are not as good as those obtained by simple measures alone. Poussaint and Ditman⁹ found that only 11 out of 47 cases treated with imipramine remained dry after two months' medication, and they were followed up for only one to three months. Shaffer, Costello, and Hill¹⁰ found that 20 out of 56 children became dry while on the drug, but only two of these remained dry after it was withdrawn. They emphasize the importance of pretreatment record keeping. Nevertheless, we feel that the charting itself has a therapeutic role. This was very noticeable in those children who became dry on simple measures. Many of them produced one drawing for their second visit—that is one dry night in three weeks—and thereafter went from strength to strength. It is interesting to note that in the series of Shaffer *et al.*¹⁰ 10 children became dry for at least one month after record keeping alone. In an ideal scientific trial the parent should keep a pretreatment record, unknown to the child. The effect of simple measures should be tried before other treatment is given. Rigorous criteria of success should be used—for example, not more than one wet night per month. A reduction in wet nights from seven to three or four a week though encouraging is not a satisfactory test of efficacy, and an adequate follow-up period is essential.

Substitution symptoms were not observed in any of our children who became dry. On the contrary, many mothers volunteered the information that the child had changed for the better after becoming dry. It may be recalled that emotionally disturbed children were referred to child guidance units.

The view that enuretic children should not be treated but will "grow out of it" is not supported by fact. White⁴ followed up 44 children who had been discharged for non-attendance two years previously and found that 34 were still enuretic. In our clinics children who had failed to attend years ago have rejoined our waiting lists.

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