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Primary Nocturnal Enuresis: Patient Attitudes and Parental Perceptions

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Abstract Primary nocturnal enuresis (PNE) is a common childhood problem. Knowledge of the child's attitudes and his parents' perceptions to enuresis will help in effective counselling of the family and improve their commitment to therapy, which contributes to the success of treatment. In a prospective questionnaire survey by the Hong Kong Childhood Enuresis Study Group, 105 Chinese children aged 9.5±1.8 years (68 boys, 37 girls) with severe PNE were recruited from nine public hospitals in Hong Kong. After informed consent, both patients and parents were interviewed by the attending doctor according to a structured questionnaire. The results showed that bedwetting embarrassed our enuretic children as they avoided talking about bedwetting problem (89.5%), avoided sleeping out (25.7%) and denied having wetting episodes (18.1%). The majority of parents (86%) thought that PNE was abnormal and was caused by renal, psychological, or brain problems. Arousal difficulties occurred in 88% of the children. Parents felt troublesome (71.4%), angry (19%), and ashamed (11.4%) of their children. Although 77% of the parent praised their children for being dry, 57% still punished their children for enuretic episodes. In conclusion, Hong Kong children with PNE were embarrassed by bedwetting while their parents had mixed-feeling of being worried (about organic illness), troublesome, angry and ashamed. A punitive attitude was still common in our local community and this may adversely affect the parent-child relationship and their commitment to treatment.

Key words Attitudes; Children; Chinese; Enuresis; Perceptions

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Introduction

Primary nocturnal enuresis (PNE) is a common problem worldwide. Epidemiological surveys in Western countries gave a prevalence in boys of 13-19% at 5 years old and 1-2% at 16 years old, while the prevalence in girls were 9-16% at 5 years and 1-2% in the late teenage years.[1] Parents' and patients' attitudes towards bedwetting can be highly predictive of their behaviour, including their readiness to engage in and persist with treatment.[2] Previous study also revealed wide differences between the parental and physician attitudes toward enuresis, so that physicians should try to understand their patients' attitudes in formatting the treatment plan.[3] Failure to recognise and understand the families' perspective, their access to resources and their socioeconomic condition may lead to

treatment failure. One should also be aware that simple extrapolation of the experience of Western studies to the local population may not be appropriate due to differences in cultural and social background. However, local data in these aspects were scanty. This report summarises the findings of a questionnaire survey of the attitudes of enuretic children in Hong Kong and their parents' perceptions towards the bedwetting problem.

Patients and Methods

Consecutive patients with severe PNE were recruited from ten pediatric or surgical departments from nine public hospitals in Hong Kong. They were included if they were Chinese children resident in Hong Kong, aged between 7 and 15 years, and had bedwetting frequency of 3 or more nights per week for the last 2 weeks of an observation period. Patients were excluded if organic diseases were suspected based on the following criteria: presence of diurnal enuresis, urinary tract infections within the preceding 3 months, polyuric disorders such as diabetes insipidus and diabetes mellitus, abnormal urinalysis and a history of renal disease, hypertension, genitourological abnormalities, mental retardation and active neurological disease, use of diuretics drugs, prior use of enuresis alarm, desmopressin or tricyclic antidepressants therapy.

After informed consent, the patients and their parents were interviewed by the attending doctor or nurse, based on a structured questionnaire with predetermined choices of responses to each question. Baseline demographic data and wetting diary were collected during the 4-week observation period after enrolment. Approval of the study was obtained from the ethics committees of the Hospital Authority and individual participating hospitals.

Results

One hundred and five children were recruited, including 68 boys (64.8%) and 37 girls (35.2%) with age of 9.48± 1.76 (mean±SD) years. The bedwetting frequency before consultation was 5.1±1.4 (mean±SD) nights per week. Seventy-five percent of the patients wetted their beds once per night, 22% wetted twice per night and 3% wetted more than twice per night. The severity of the wetting was graded as soaking through the bedsheets in 73.0%, wetting the pajamas only in 13.5% and wetting the underwear only in 13.5%. A majority of the parents (88%) reported that their children were deep sleepers and difficult to be aroused. Eighty percent of patients were not aware when the wetting occurred. The rest would wake up, but only 12% would get up to finish the voiding in the toilet or change the bedding immediately.

One third of these children had at least one parent or sibling affected by PNE as well. These included 12 mothers (11%), 12 fathers (11%) and 22 siblings (21%). Concerning the sleeping arrangement, 85.7% of the enuretic children shared rooms with other family members (half sharing with siblings). About 28.6% shared beds with other family members. Concerning the parental education level, 9.5%, 69.5%, and 19% of the children had either one or both parents being university, secondary school and primary school graduates respectively. In the remaining 2%, both parents never entered school.

Table 1 showed the children's reactions to PNE. The majority were embarrassed by the enuretic problem: They would avoid talking about bedwetting with the others (89.5%), or pretend that bedwetting had not occurred (18%). Forty percent need to wear nappies every night. About half (51.4%) would change the bedding themselves after wetting. Their social activities may be adversely affected

Table 1 Children's reactions to nocturnal enuresis

	Total N=105	Children aged 7-10 years old N=69	Children older than 10 years N=36	P-value by Fishers' exact test
Avoid talking about enuresis with other people	94 (89.5%)	61 (88.4%)	33 (91.7%)	>0.05
Deny that they had enuresis, pretend to be dry	19 (18.0%)	10 (14.5%)	9 (25.0%)	>0.05
Avoid sleeping out of home	27 (25.7%)	17 (24.6%)	10 (27.8%)	>0.05
Use nappy every night	42 (40.0%)	29 (42.0%)	13 (36.1%)	>0.05
Change bedding themselves	54 (51.4%)	36 (52.2%)	18 (50.0%)	>0.05

because 25.7% would avoid sleeping-out, although 21.9% continued to have sleeping-out activities. Also there were no differences in the incidence of these adverse reactions between children aged 7 to 10 years and those over 10 years of age.

Table 2 showed the parents' attitudes and perceptions to PNE. Most were worried that PNE was abnormal and indicated kidney and bladder diseases (51%), psychological or behavioural problems (25%), neurological abnormalities (4%) or some unknown pathological causes (2%). Eighty-three percent of parents of children without a positive family history of PNE thought that PNE was abnormal. Surprisingly, the same belief was held by 80% of parents who had more than one affected children, and by 77% of parents who (or their spouses) had PNE themselves. This same perception was held by similar percentages of parents of different education levels, whether they had university (100%), secondary school (80%), primary school (80%) or no formal education (100%).

In addition to their worries, most parents felt troublesome (71%), angry (19%) and ashamed of their children (11%). Various remedies have been tried, including lifting at night (80%), limiting fluid intake in the evenings (69%), taking herbal medications (28%) or making star chart (18%).

Overall, 77% of the parents would praise their children for achieving dry nights while 57% would punish their children for wet nights. There was a trend that when either or both parents had higher educational level, a higher percentage of them would use positive reinforcement and a lower percentage of them would use punishment (see Table 3).

Discussion

This study confirms our belief that PNE is a significant problem from the perspectives of the child and his/her parents. Understanding their perceptions will help in formulating a successful treatment plan.

From previous studies, children with PNE had significantly lower self-esteem, which led to loss of confidence, poor school achievement and difficulty in making friends.[4] The impact of bedwetting as an adverse life event was comparable to poor academic attainment and

Table 2 Parents' attitudes and perceptions

Parents beliefs about the cause of enuresis:	
They think that enuresis is abnormal	82%
They think that it is a kidney or bladder disease	51%
They think that it is a psychological or behavioural problem	25%
They think that it is a neurological disease	4%
They do not know the cause	2%
Parents emotional reactions to their enuretic children:	
They felt troublesome	71%
They felt angry	19%
They felt ashamed	11%
Parents perceptions of useful remedies:	
They lifted children to toilet in middle of night	80%
They limit children's fluid intake before bedtime	69%
They give herbal remedies to children	28%
They use Star Charts to encourage children to achieve dryness	18%
They praise children for achieving dry nights	77%
They punish children for having wet nights	57%

Table 3 Relation of parental attitudes to education levels

		Parents education levels		
Parents attitude	**Overall**	**University**	**Secondary school**	**Primary school**
Praise for dry nights	77%	90%	74%	85%
Punish for wet nights	57%	40%	58%	65%

the experience of being teased frequently.[5] Bedwetters feel ashamed and sad.[2] Our local PNE children had the same experience of feeling embarrassed: They avoided talking about bedwetting (89.5%), and pretended to be dry by telling lies and hiding their wet clothing (18.1%). Similar to many reports,[6] 25.7% of our PNE children avoided staying overnight with friends or taking school trips that involve staying away from home. Their low level of self-confidence, their fear of being discovered by peers to have bedwetting, and perceived helplessness may hinder their commitment to any treatment programme.[2] These adverse effects occurred in the younger as well as the older children in our study sample, as shown in Table 1.

As for the parents of enuretic children, previous studies have reported their problems of feeling anxious and guilty, of losing confidence in their parenting skills and of parent-child relationship.[4,7] In addition, 86% of the parents in our sample worried about organic or psychological disorders as a cause of bedwetting. This worry was present whether they had a positive family history of PNE, and whatever their educational level was. In fact, 28% of parents had tried herbs to "strengthen a weak kidney", but the majority did not seek proper medical advice. This reflected the general public's ignorance about PNE, to which any future education programme and individual treatment plan have to address.

More worrying are the negative feelings of parents towards their enuretic children. The parents in our sample felt ashamed (11.4%), troublesome (71.4%) and angry (19%) towards the bedwetting events as these meant extra spending for buying nappies, extra work for washing clothes, and disturbed sleep for lifting children to toilet. Such perceived burden has been reported to be associated with greater parental intolerance,[8] which led parents to blame their children and punish them.[8,9] Punishment was also commonly practised by the local parents (57%). Indeed, bedwetting caused an increased risk of non-accidental injuries[10,11] and has been reported as the second commonest reason of child abuse, second to persistent crying.[12] It has also led to poor parent-child relationship.[7] This punitive approach and poor family relationship makes it unlikely to provide a supportive emotional climate for the young person to learn the skill of becoming dry, and in turn leads to further frustration and helplessness.[2] Prior punishment was found to be a predictor of poor treatment outcome when alarm was used.[13] Maternal anger was associated with a higher drop out rate and alarm was not recommended as the first line treatment when parental intolerance was identified.[14] Paediatricians should advise parents to refrain from punishment and adopt a positive empathetic attitude to support their children. Fortunately 77% of the parents in our study would also praise their children for dryness and this may hopefully help to offset the damaging effects of the punitive attitudes.

Another issue to consider in treatment plans was the family accommodation. Most of the children in our study needed to share rooms (85.7%) and even beds (28.6%) with other adults or siblings. This was a common living arrangement in overcrowded families in Hong Kong, but this may make the use of alarm therapy less feasible because of disturbance to other family members.

In conclusion this study provides us with an understanding of the prevalent parental and child attitudes towards PNE which is helpful in management. Counselling should be aimed at relieving their misconceptions, worries, and guilt. Secondary psychological damage should be prevented by advising against the punitive approach and for the supportive approach. Treatment options should be discussed and a joint decision made on an individual basis after consideration of the family dynamics and home environment. The importance of frequent follow-up with emotional support, reassurance and encouragement was reflected by the improvement of children's self concept and parent's perception of their behavior regardless of the treatment outcome.[15]

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