SHORT COMMUNICATION

Evaluation of depression and self-esteem in children with monosymptomatic nocturnal enuresis: A controlled trial

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Summary

Objectives: Nocturnal enuresis (NE) is very common and is one of the most common causes for patients to be admitted to urology, pediatrics, child psychiatry and child surgery departments. We aimed to investigate the effect on depression and self-esteem of this disorder that can cause problems on person’s social development and human relations.

Material and methods: 90 patients who were admitted to our clinic with complaints of nocturnal enuresis were enrolled. Investigations to rule out organic causes were performed in this group of patients. Out of them 38 children and adolescents (age range 8-18 years) with primary monosymptomatic nocturnal enuresis (PMNE) agreed to participate in the study. In the same period 46 healthy children and adolescents with a similar age range without bed wetting complaint were included in the study as a control group.

The age of the family, educational and socioeconomic level were questioned and Piers-Harris Children’s Self-Concept Scale (PHCSCS) and Children’s Depression Inventory (CDI) forms were filled out.

Results: Mean age of the cases (18 females or 47.4% and 20 males or 52.6%) was 10.76 ± 3.82 years whereas mean age of controls (26 females or 56.5% and 20 males or 43.5%) was 10.89 ± 3.11 years. Depression scale was significantly higher (p = 0.001) in the case group than in the control group (10.42 ± 4.31 vs 7.09 ± 4.35). In both groups there was no statistically significant difference by age and sex in terms of depression scale (p > 0.05).

Conclusion: NE is widely seen in the community and is a source of stresses either for children and for their families. When patients were admitted to physicians for treatment, a multidisciplinary approach should be offered and the necessary psychological support should be provided jointly by child psychiatrists and psychologists.

KEY WORDS: Depression; Self-esteem; Nocturnal enuresis.

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INTRODUCTION

Nocturnal enuresis (NE) is very common in the society and is one of the most common causes for patients to be admitted to urology, pediatrics, child psychiatry and child surgery departments. NE is recurrent urinary incontinence in children over the 5 years old that is observed during the sleep (1). The prevalence of nocturnal enuresis has been reported as 5.5-16.8% (2,3). NE is classified as primary and secondary. NE may cause stress and emotional problems in person and families. On the other hand NE may develop secondary to stress on patients and families (4). However, there are conflicting results as to whether these stressful situations cause psychological problems in enuretic children. Some authors assert that there is no difference of the psychological problems between the normal population and monosymptomatic enuretic children, but some others have argued that NE cause clinical or subclinical psychological problems (5). In a study of bed wetting and behavioral problems, conduct problems and deficits in attention up to age 13 and internalizing problems up to age 15 have been reported more frequently in children whose bedwetting continue over 10 years of age (6). It may seem that there is a relationship between NE and behavioral problems increasing with age, but cause and effect relationship has not been clearly elucidated (7).

We aimed to investigate the effect on depression and self-esteem of this disorder that can cause problems on person’s social development and human relations.

Material and method

Ninety patients who were admitted to our clinic with complaints of nocturnal enuresis were enrolled. Out of them 38 children and adolescents (age range 8-18 years) with primary monosymptomatic nocturnal enuresis (PMNE) agreed to participate in the study and filled out questionnaires. In the same period 46 healthy children and adolescents with a similar age range without bed wetting complaint were included in the study as a control group.

Investigations (history, urinalysis, urine culture, urinary tract ultrasonography) were performed in the case group patients to rule out organic causes. Age and educational and socioeconomic levels were questioned in both groups and Piers-Harris Children’s Self-Concept Scale (PHCSCS) and Children’s Depression Inventory (CDI) forms were filled out. Patients in both groups were classified accord-
ing to age in 2 groups 8-11 years and > 12 years. Non-
PMNE wetting bed or patients on any type of treatment
were excluded from the study. Patients who missed to fill
all or a part of the questionnaire were excluded from the
study.
Student t test via SPSS 13 for Windows was used for sta-
tistical analyzes. P value < 0.05 was considered statis-
tically significant.

RESULTS
Mean age of the cases (18 females or 47.4% and 20 males
or 52.6%) was 10.76 ± 3.82 years whereas mean age of
controls (26 females or 56.5% and 20 males or 43.5%) was 10.89 ± 3.11 years.
Twenty six patients (68.4%) out of the case group were
8-11 years of age and 12 (31.6%) were > 12 years where-
as 32 (69.6%) out of the control group were 8-11 years of age, and 14 (30.4%) were > 12 years.
There were statistically significant differences between
the two groups in self-esteem scale (Table 1).
No statistically significant difference in term of gender
was found (p > 0.05).
In the case group no statistically significant difference of
the total score was found by age (p > 0.05), but a sta-
tistically significant difference was detected in term of
behavior and comply (p = 0.022). In the control group,
no statistically significant difference of the total score was
found by age (P > 0.05).
Depression scale was significantly higher (p = 0.001) in
the case group than in the control group (10.42 ± 4.31
vs 7.09 ± 4.35). In both groups there was no statistically
significant difference by age and sex in terms of depression
scale (p > 0.05).
In both groups, occupation of parents, education and
socioeconomic status didn’t affect PHCSCS and CDI
scores (p > 0.05).

DISCUSSION
NE is fairly common all over the world and this disease
averagely affects one in 10 children. Effects on children’s
social and psychological development are frequently
observed. Self-identity and sexual identity are acquired
during childhood and adolescence, therefore a number of
additional problems like mood disorders are seen with
NE. NE is fairly common in our country and causes many
negative effects on individuals and families. This condi-
tion may cause the fear of being noticed by others, humili-
ation, anxiety, social withdrawal, high anxiety levels and
behavior problems (8).
In a study that investigated how children see enuresis it
was reported that bedwetting is the most stressful events
after family fights and divorce (9). Adverse effects on
mothers have also been described (11). NE has depress-
ive effects on children and their families (10). In our
study, a statistically significant difference of depression
scores (CDI) was detected between enuretic patients and
controls without difference by age, gender, education and
socio-economic level. Decreased self-esteem, social
adjustment problems in school and with friends and
behavior problems have been reported in children with
enuresis (12). In our study, a statistically significant dif-
ference of self-esteem PHCSCS scores was detected
between patients with enuresis and controls with signif-
icant difference of sub-titles of happiness, anxiety and
popularity. In contrast Hirasing et al reported no signifi-
cant relationship between nocturnal enuresis and behav-
ioral and emotional problems (13). Decreased self-esteem was detected in enuretic adults as
in children (14). Liu et al. reported that there were more
problems with behavior, emotional, and academic
achievement in children with NE and observed that they
increased with age (15).
Delay of the family to apply to health institutions for
therapy increases children self-esteem problems. In our
study, only the behavior and adaptation sub-title was sig-
nificantly different in terms of age whereas age-related
differences were not observed by other parameters
although this could be explained by insufficient size of
the sample. In fact a limitation of our study could be low
number of patients from a single center and lack of grad-
uation of the severity of NE.

CONCLUSIONS
In conclusion, NE that is frequently observed in the com-

munity is a source of stresses for either children or their
families. It should be considered that NE may cause loss of
self-confidence and depression in children. Trust should
be provided for children and families and training should be given according to
treatment planning. When patients were
admitted to physicians for treatment, a
multidisciplinary approach should be
offered and the necessary psychological
support should be provided jointly by
child psychiatrists and psychologists.

Table 1.
Comparison of the two groups in terms of self-confidence.

<table>
<thead>
<tr>
<th></th>
<th>Case group N=38</th>
<th>Control group N=46</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happiness</td>
<td>9.26 ± 3.1</td>
<td>10.71 ± 1.96</td>
<td>0.012</td>
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<tr>
<td>Anxiety</td>
<td>7.47 ± 2.64</td>
<td>9.35 ± 2.0</td>
<td>&lt; 0.001</td>
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<tr>
<td>Popularity</td>
<td>7.95 ± 1.99</td>
<td>9.41 ± 1.44</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Behavior and compliance</td>
<td>9.97 ± 3.19</td>
<td>11.28 ± 2.86</td>
<td>0.051</td>
</tr>
<tr>
<td>Physical appearance</td>
<td>8.05 ± 1.87</td>
<td>8.22 ± 1.74</td>
<td>0.677</td>
</tr>
<tr>
<td>Mental and school</td>
<td>5.13 ± 1.3</td>
<td>5.65 ± 1.12</td>
<td>0.052</td>
</tr>
<tr>
<td>Total</td>
<td>54.26 ± 12.98</td>
<td>63.41 ± 9.14</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

REFERENCES
standardization of terminology of lower urinary
tract function in children and adolescents: report
from the Standardisation Committee of the
International Children’s Continence Society. J

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