Lasers in Medical Science (2019) 34:1049–1050
https://doi.org/10.1007/s10103-018-2660-0

LETTER TO THE EDITOR

Letter about: nocturnal enuresis in children between laser acupuncture and medical treatment—a comparative study

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Received: 21 July 2018 / Accepted: 4 October 2018 / Published online: 8 October 2018

Dear editor:

We read with great interest the paper by Dr. Alsharnoubi [1]. This study showed the effectiveness and safety of laser acupuncture for the treatment of enuresis and provided strong scientific evidence for further study. The results indicated that group B patients (managed with laser acupuncture) showed significantly higher cure rate (73.3%) than group C (managed with a combination of laser acupuncture and desmopressin, 13.3%). However, we do not quite agree that the treatment response of desmopressin combined with acupuncture is poorer than that of acupuncture alone. In this study, patients aged 5–15 years old with enuresis were included. Patients were unclassified according to monosymptomatic (MNE) or nonmonosymptomatic nocturnal enuresis (NMNE). Generally speaking, patients with NMNE have more severe symptoms and require more complex treatment than those with MNE. Patients with NMNE are frequently refractory to standard therapy. Laser acupuncture group possibly included more patients with MNE than those with NMNE, but more patients with NMNE were included in the combined group than those with MNE. The patients in the combined group may also exhibit more serious enuresis symptoms (e.g., higher frequency of enuresis) than the two other groups before interventions.

In the discussion [1], the authors pointed out that in group C, only seven patients followed their practical guidelines and instructions, while eight patients did not. Hence, the author needs to analyze the treatment responses in the full analysis sets (patients who were enrolled in this study and began the treatment) and per-protocol sets (patients who received the treatment of interest and have not dropped out for any reason). If the results are inconsistent, then the author should be cautious in drawing conclusions. Therefore, the authors need to investigate the effect of high dropout rates on the results. If eight patients in group C (combination) were excluded, then the results are as follows (sensitivity analysis): groups A (desmopressin only) and C exhibited similar therapeutic effects (3/15 [20.0%] vs. 2/7 [28.6%], $P = 0.655$); group B showed significantly higher recovery rate than group A (11/15 [73.3%] vs. 20%, $P = 0.003$). However, the difference in terms of the recovery rate between groups B and C was insignificant (73.3% vs. 28.6%, $P = 0.047$, adjusted $P = 0.0125$). The results revealed that laser acupuncture was superior to combination therapy, but the difference was statistically insignificant. In addition, the authors did not use the new definition of treatment response as evaluation criteria according to the International Children's Continence Society. Complete response should be defined as a 100% reduction [2], rather than "enuresis disappeared at least 14 consecutive days." A clerical error may be present in the methodology, that is, average power 15 W should be 15 mW.

Desmopressin is a synthetic analog of antidiuretic hormone that is frequently used for NE and is an evidence-based therapy (grade Ia evidence). Desmopressin is a well-tolerated drug and can improve NE symptoms rapidly. The side effects of desmopressin, including abdominal discomfort, nausea, headache, allergic reactions, water intoxication, and epistaxis, are rare. In the study of Moursy et al. [3], group C patients show higher cure rates (managed with a combination of laser acupuncture and desmopressin) than the patients in the group treated with laser acupuncture alone. Therefore, treatment with acupuncture combined with desmopressin may be more effective or at least equal to that with acupuncture alone. The results of this study may be biased due to several limitations mentioned above.

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References

1. Alsharnoubi J, Sabbour AA, Shoukry AI, Abdelazeem AM (2017) Nocturnal enuresis in children between laser acupuncture and medical treatment: a comparative study. Lasers Med Sci 32(1):95–99
2. Austin PF, Bauer SB, Bower W, Chase J, Franco I, Hoebeke P, Rittig S, Vande Walle J, von Gontard A, Wright A, Yang SS, Nevéus T (2014) The standardization of terminology of lower urinary tract function in children and adolescents: update report from the Standardization Committee of the International Children's Continence Society. J Urol 191(6):1863–1865
3. Moursy EE, Kamel NF, Kaseem AF (2014) Combined laser acupuncture and desmopressin for treating resistant cases of monosymptomatic nocturnal enuresis: a randomized comparative study. Scand J Urol 48(6):559–564