

RESULTS OF PHYSIOTHERAPEUTIC TREATMENT IN CHILDREN WITH NOCTURNAL ENURESIS

Hypothesis / aims of study

Nocturnal enuresis is characterized by involuntary urination of children with an age in which the urinary control should have been already reached. Nocturnal enuresis affects 15% of the infant population without neurological disability, nightly urinary loss associated with urgency (such as crossing legs and squat sitting), dysuria, intestinal constipation and encopresis. Appointments usually originate from urinary complaints and discomfort, such as: wet bed and bed clothes, interruption of parents' sleep, social isolation and diminution of children's self esteem. The treatments often suggested need association with several specialties, where physiotherapy might act as an adjuvant therapy to medication. The aim of this study is to evaluate efficacy and results of physiotherapeutic treatments in children with nocturnal enuresis.

Study design, materials and methods

Sixteen children with age between 5 and 10 years old were enrolled and assisted at our Division of Pediatric Urology. All of them had at least one episode of nocturnal enuresis daily. During a three-month follow-up they were instructed to perform Kegel exercises in order to reinforce their pelvic floor, abdominal muscles, thigh and gluteus adductors, associated with respiratory and hygienic-dietetic counseling and ludic micturition time chart. The children were accompanied during 3 months by twice a week appointments, for 60 minutes. Exercises are utilized in order to increase resistance and strengthening of the cited muscles. The muscle resistance was increased through Kegel exercises, using 3 series of 15 repetitions of contraction and relaxation. Regarding the muscle tonus, exercises were performed in a similar sequence, although with sustained contractions for 10 minutes and relaxation, with rest periods of 20 seconds, due to the proprioceptive deficiency of the pelvic floor muscles. The proprioception of the floor muscles was managed with exercises of the pelvic clock. The following equipments were utilized for the exercises performance: Bobath ball, pillows and positioning cylinders.

Results

After three months of physiotherapeutic treatment, 12 patients presented improvement in nocturnal urinary loss episodes (75%), three patients (18,75%) abandoned the assistance and one patient (6,25%) did not achieve any improvement at all. Those who had improved demonstrated an average of 2.3 nocturnal urinary loss per week (range 0-3), evaluated through a ludic micturition time chart. Those who abandoned the treatment found it difficult to attend their appointments because of distance between home and medical office.

Interpretation of results

The muscular reeducation through physiotherapy has been discussed as an alternative technique in treatments. Even though it is a repetitive and long term treatment, previous study demonstrated that children are compliant.[1] Further more, it has been reinforced with the utilization of associated techniques as hygienic-dietetic counseling, which makes the children themselves responsible for their treatment. It is of paramount importance to develop a quality relationship between patient and therapist in order to change their behaviors, such as interrupting the diapers use and advising parents to avoid condemning their children.[2] Aiming to motivate the children in all of the phases, the exercises should be always accomplished through the physiotherapist supervision.[3] Therefore, the results presented are in accordance with the authors who consider physiotherapy as an evolution in treatments.

Concluding message

We have observed a significant improvement through the physiotherapeutic treatment, which had a good acceptance by children and their parents. Therefore, it should be considered an alternative treatment in cases of nocturnal enuresis.

1. Curr Opin Obstet Gynecol. 1994 Aug;6(4):331-5.
2. Acta Paediatr. 2002;91(4):475-9.
3. Scand J Urol Nephrol. 1997 Dec;31(6):533-6.

FUNDING: NONE

DISCLOSURES: NONE

HUMAN SUBJECTS: This study was approved by the Comit e de  tica em Pesquisa - FCM - UNICAMP and followed the Declaration of Helsinki Informed consent was obtained from the patients.