54 - EFFECT OF A PHYSICAL THERAPEUTIC INTERVENTION PROTOCOL IN THE CHILD MICTURITIONAL DISFUNCTION

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INTODUCTION

The child micturitional dysfunction (CMD) is defined as an abnormal micturitional pattern for the child's age, not being normally recognized before the acquisition of the daily urnirary control. It includes the loss of the coordinated ability of storage, stocking and elimination of urine[1,2]. It is about a benign pathology which occurs in children neurologically normal, and whose ethnology still remains little clear[3].

Its incidence may vary from 2% to 25% of children in phase of sphincter training[4] and it is inversely proportional to age. It hits children mainly between 3 and 7 years of age, in the proportion of 9 girls for 1 boy, and it shows important psychosocial characteristics[5].

The symptoms may vary widely, being the daily urinary losses and the infection of the urinary treat among the most frequent[5]. Other present symptoms include the micturitional urgency and inevitability, being, in some cases, associated to hyperactivity of the detrusor[6]; urinary incontinence; the increase of the urinary or polyuria frequency; maneuver of holding; faecal constipation or incontinence and force to evacuate [3,7,5].

Chandra[8], evaluating 583 children aging between 5 and 9 years, observed that the urinary urgency and the maneuvers of pelvic muscle contraction to delay the micturition and prevent urinary losses are among the most common problems.

The development of continence and voluntary control of micturition involves not only the **SNC,** but also the learning, where the micturitional training depends on the cognitive perception and the maturity of the urinary treat. Normally, at about five years of age, the child is able to control or delay the vesicular emptying in an acceptable social way.

The micturitional control is established during the first four to six years of life, translating itself in a complex phenomenon, which in great part still remains little understood. Most of the times, the daily control precedes the nightly one in a continuous and progressive process[7,9].

CHILD MICTURITIONAL DISFUNCTION (CMD)

The persistence of the child micturitional pattern, either because of delay in the maturation of the urinary control or of behavior disturbances committing the sphincters training, may result in a functional disturbance of the inferior urinary treat (IUT), generating a CMD[10].

According to some authors, the vesicular contractions may be developed also by pelvic floor muscle dysfunction. Such contractions may cause the increase of emptying pressure[11,12] or cause the descompensation of the detrusor, resulting in the incomplete vesicular emptying[5].

If the complaints of incontinence are persistent, social and school problems are inevitable and psychological support may be initiated[13].

The literature available is not yet clear about the possible causes of the functional disturbances of the IUT. During the normal development, the child starts to use the mechanisms of control of the central nervous system towards the IUT in a better way. However, some children use maneuvers to avoid the urinary losses or even to inhibit the micturitional urgency; others contract the pelvic floor (PF) to inhibit the contraction of the DETRUSOR and delay the micturition. The contraction of the muscles of the PF used as a voluntary maneuver to regulate the cycle of the IUT may keep the dysfunction of the IUT and result in hyperactivity of the PF, which causes outline and central changes generating a new micturitional control system. This system is characterized by the loss of coordination between the muscle detrusor and the PF, with failure in the transmission of the inhibiting signals, and, consequently, hyperactivity of the detrusor[14].

All the patients who bear vesicular dysfunction must be subjected to a micturitional retraining routine, which consists of behavioral measures. These orientations aim to provide a suitable vesicular emptying and consist of programmed micturitions every three or four hours, a good daily hydric ingestion and suitable relaxation during micturition. Children must still be oriented not to delay the micturition, correct their diet habits ingesting foods rich in fiber in order to keep the suitable intestinal function, and avoid foods rich in caffeine and citric fruits, which may improve the vesicular hiperactivity[15,16].

The physical therapy technique used in adults having urinary incontinence was described initially by Kegel[17] and consists of exercising the muscles of the PF. This modality of treatment, developed for stress incontinence, also showed to be effective in the urge-incontinence[18]. Subsequently it was described the effectiveness of this treatment in children having functional urinary incontinence[19]. While in adults, the objective is to strengthen the PF muscle, in children, the purpose is to get effective contractions and better relaxation of these muscles, with better PROPRIOCEPTION of the PF muscle[20].

In this context, the PF, whose control is voluntary, has a major role in the CMD physical therapy. The objective of this treatment is teaching the patients how to relax the PF muscles during micturition[21].

The biofeedback may be useful in some patients because it assists in the recognition of the urethral and abdominal sphincter muscle besides teaching children how their behavior during the urinary filling and emptying phase must be[22].

The electrical therapy does not take part of the approach of 1st line in children having functional disturbances of the IUT, being reserved for the cases resistant to the conventional therapy. There are testimonials of good results of a technique of transcutaneous neuromodulation by placing surface electrodes in the sacral region (S3), in children having urgency and urge-incontinence, but they are studies that need future validation[23].

OBJECTIVE

Verify the effect of a physical therapeutic intervention protocol in the child micturitional dysfunction.

METHOD

Clinical study of a case of child micturitional dysfunction, approved by the Committee of Ethics and Research (CER)

do CBES, and authorized by the Term of Free and Clear Consent (TFCC) signed by the child's mother. The mother followed the participant in all the procedures done in this study.

The work counted on the participation of a girl, aging 10 years, who brought symptoms and complaints of CMD. The participant respected the criteria of inclusion as not being submitted to any CMD treatment, carried out exclusively the proposed protocol; agreed to participate in the research; presented negative exam for urinary infection; the responsible signed the TFCC, authorizing the participation of the child in the research; and did not present the criteria of exclusion such as beginning any other therapeutic intervention which not the protocol of this study and giving up the research before completing the number of sessions of the protocol.

Initially the participant and the responsible answered the data required in the evaluation sheet. In the sequence, they answered the questionnaire for evaluation of hyperactive bladder; showed the level of satisfaction with school, family, social and personal lives related to CMD collected by the Analogic Visual Scale - AVS[24] to register the qualitative evolution of CMD; and answered the Escore de Farhat et al[23] to register the quantitative evolution of CMD.

In the physical exam, for the verification of the awareness of the PF muscle as well as its isolated contraction, the patient was previously oriented to contract the PF as if holding the act of urinating.

After the physical exam, the participant was oriented to drink 4 glasses of water 1 hour before the first session for the fulfillment of the PAD TEST and it was verified the quantity of urinary loss, and it was classified in lack of loss, light loss and serious loss[24].

At the end of the initial evaluation, the participant handed the micturitional and defaecatory diary requested in the interview and was oriented to fill in daily, in all sessions of the protocol, and hand in the first session of each week, the diary properly filled to verify the clinical evolution of CMD.

The Escore de Farhat et al and the Analogical Visual Scale - AVS were applied in the first, tenth and last session of the protocol.

The protocol of treatment was composed of 20 sessions of 50 minutes each, with frequency of two days weekly, in consecutive weeks approximately in the period of three months. It consisted of orientations for the behavioral reeducation and physical therapeutic intervention.

The patient received verbal and written educational orientations complementary to the protocol of this study, with relation to the suitable way of micturition, defaecation, liquid ingestion, diet habits and daily filling of the micturitional and defaecatory diary.

In all the sessions the following protocol was carried out rigorously: exercises of proprioception for the awareness of the PF; global and specific stretching for the trunk muscle, PF and **MMII**, which were being alternated and progressed through the treatment; with the objective of relaxing, get amplitude of movement and develop perception of body positioning, always associated to the exhale moment, with repetitions of three times each stretching and all kept for 30 seconds, and exercises for the strengthening of the muscle of MMII, PF and trunk, which also alternated and progressed during treatment.

RESULTS

The initial evaluation of the PF was carried out over the underwear, by the participants' request. The researcher did palpation, normotonus in the PF region was observed, good contraction for the slow fibers, counting that the participant got to keep the contraction for 6 seconds with the same intensity and light contraction for fast fibers. In the final evaluation, the participant presented good contraction for both slow and fast fibers, and with the lack of contraction of the accessory muscle.

The result of the PAD TEST carried out in the first session there was not significant loss noticed in the weight of the pad, however discrete leaking on the pad was verified. In the PAD TEST carried out in the final evaluation, there was no loss of urine as well and it did not present leaking.

The analyses of the micturitional and defaecatory diaries are showed on Table 1.

Table 1:Summary of the micturitional and defaecatory diaries of the 10 weeks

	Daily Micturitions	Weekly Defaecation	Weekly urinary losses	Moments of losses
Week 1	9	1	7	Very full bladder, when sneezing, sleeping
Week 2	4 to 6	4 consecutive days	4	Sleeping and making effort
Week 3	5 to 6	Each 2 days	3	Sleeping and when the bladder was very full
Week 4	5 to 6	Daily	3	Sleeping and making effort
Week 5	4 to 6	0	2	Sleeping
Week 6	6	3 in alternate days	1	The movie was good and she decided to wait to go to the bathroom
Week 7	4	3 in alternate days	1	Sleeping because she drank too much water before going to bed e did not go to the bathroom a lot during the day because did not feel necessity
Week 8	5 to 8	Daily	1	Sleeping
Week 9	5 to 6	Daily	0	
Week 10	5 to 6	Daily	0	

On the 7th and 8th week, the participant referred that she got to control the urethral sphincter, stand up from the bed and finish the act in the bathroom.

Through the treatment, she switched between episodes of 1 loss during the night and no losses, with intervals between 7 and 13 days, until she remained 21 days without urinary losses.

The initial questionnaire of the hyperactive bladder had a result of 40 points, what showed great possibility hyperactivity of the bladder. In the 10th session, that is, in the half of the intervention, 27 points were scored, still showing possibility of hyperactive bladder. In the final evaluation, the questionnaire of hyperactive bladder scored 15 points, counting that what bothered her a lot was urinating on the bed during the night, urinate frequently during the day and lose urine after a very strong desire to urinate, which, according to the participants' testimonial, rarely occurred.

In the initial evaluation, the participant answered to the Escore de Farhat, having as a result of the sum 13 points, being 3 points from the stress situation, the birth of the sister, and 2 points indicating that the underwear was wet, 2 points indicating that she wetted the clothes during the day, 2 points for forcing to evacuate, 2 points for doing the "pee dance", 2 points for the micturitional urgency. In the 10th session the escore was applied again, having as a result the sum 4 points, 2 poits of the stress situation, and 1 point indicating that the underwear was wet, but few times. In the final evaluation, only 3 points were presented for the stress situation.

In the initial evaluation, the participant marked her level of satisfaction towards the current situation, in which she answered to be dissatisfied with the problem, because she was ashamed of losing urine close to her school friends. In the 10th session, there was improvement in the case, existing greater level of satisfaction, and she even mentioned no longer losing urine at school, which made her very satisfied with the treatment. In the final evaluation, there were improvements in her case of UI, and the level of satisfaction is satisfied.

DISCUSSION

The micturitional reeducation has showed good results and consists of a program that encloses 4 focuses: the cognitive, for the awareness of her difficulties and learning normal micturitional parameters; the condition, for the fulfillment and following of a micturitional diary; the biofeedback for relaxation and contraction of the pelvic floor exercises observed on the screen of na electromyography machine; and the control of the intestinal constipation for exercises, massages, condition of schedule and diet rich in fibers. The most complete vesicular emptying possible is oriented, with the suitable relaxation of the perinea sphincter[25,26].

In a study carried out in children from 3 to 9 years old, the Escore de Farhat was used for an evaluation of the micturitional dysfunctional that was originally developed and subjected to a study of validation in an ambulatory in Canada. The constipation occurred in 3,1% of the children, counting that 8,8% described force to evacuate in 15 days or more in the last month. The prevalence of the general micturitional dysfunctional was of 24,2%, being 11,2 in boys and 35,8% in girls[26].

Most of the studies of behavioral therapy that include *biofeedback* or kinetic therapy does not define the duration of the treatment and this one ceases with a resolution of the symptoms and/or urodynamic alterations occur, period that varies from 4,7 months to 9 months of treatment[27,28].

CONCLUSION

The protocol of physical therapeutic intervention in the child micturitional dysfunction used in this study of case presented beneficial effect, shown by loss of CMD in the end of the same. The CMD decreased gradually through the treatment.

There was an improvement in the score of the questionnaire of hyperactive bladder, from 40 points dropping to 15 points, what meant decrease of the bladder hyperactivity.

The score of the Escore de Farhat et al decreased gradually as the reduction of the episodes of urinary losses did too.

There was a change of the level of satisfaction counting that she presented dissatisfied in the present of CMD, and satisfied in the absence of the same.

The questionnaire of hyperactive bladder, the Escore de Farhat et al and the level of satisfaction evoluted gradually in the proportion that the case of micturitional dysfunction decreased, showing important relation between the improvement of the CMD and the improvement of the case of hyperactive bladder, of the Escore de Farhat e AVS.

ABSTRACT

Effect of a physical therapeutic intervention protocol in the child micturitional disfunction

The child micturitional dysfunction (CMD) is defined as na abnormal micturitional pattern for the age of a child, not being recognized before the acquisition of the daily urinary control. The urinary escapes are socially badly tolerated and understood by child and family members. Thus the individualization and application of a specific treatment is important. The objectives were verifying the effect of a physical therapeutic intervention protocol in CMD; analyzing the evolution of CMD and the changes in the level of satisfaction through the Analogical Visual Scale (AVS); comparing the score of the questionnaire of evaluation of hyperactive bladder and Escore de Farhat before and after the treatment. Clinical study of a case of CMD of a girl, 10 years old, who presented symptoms of CMD. The protocol was composed of 20 sessions, with frequency of 2 days weekly, and consisted of orientations for behavioral reeducation and physical therapeutic intervention with stretching and exercises for the muscular groups involved. The participant answered the evaluation sheet, the questionnaire for evaluation of hyperactive bladder and the Escore de Farhat, and indicated the level of satisfaction in the AVS. The physical therapeutic intervention protocol in CMD used presented benefic effect, shown by the absence of CMD in the end of the same. There was an improvement in the questionnaire of hyperactive bladder, which meant decrease of the hyperactivity. The score of the Escore de Farhat decreased gradually as the episodes of urinary losses did too. There was a change in the level of satisfaction counting that she presented dissatisfied in the presence of CMD, and satisfied when in the absence of the same. The questionnaire of hyperactive bladder, the Escore de Farhat and the level of satisfaction evoluted gradually in proportion that the case of CMD decreased, showing na important relation between the improvement of CMD and the improvement in the case of hyperactive bladder, of the Escore de Farhat and the AVS.

Key-words: Micturitional dysfunction, Children, Physical therapeutic intervention

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REFERENCES:

1. KOOF SA, WAGNER TT, JAYANTHI VR. The relationship among dysfunctional elimination syndromes, primary vesicoureteral reflux and urinary tract infections in children. **J Urol** 1998; 160:1019.
2. VAN GOOL JD. Enuresis and incontinence in children. **Semin Pediatr Surg** 2002; 11: 100-7.
3. HELLERSTEIN S, LINEBARGER JS. Voiding dysfunction in pediatric patients. **Clinical Pediatrics** 2003; 42 (1):43.
4. AMARO JL, GOLDBERG J, TRINDADE FILHO JCS, AGOSTINHO AD, VERCESI LAP. Voiding dysfunction in childhood. **Braz J Urol** 2000; 26:86.
5. NORGAARD JP, VAN GOOL JD, HJALMAS K, DJURHUUS JC, HELLSTROM AL for International Children's

Continence Society. Standardization and definitions in lower urinary tract dysfunction in children. **Br J Urol** 1998; 81(3): 1-16.
6. VERECKEN RL, PROESMANS W. Urethral indstability as an important element of dysfunctional voiding. **J Urol** 2000; 163:585.
7. RIEN JM: Pediatric voiding dysfunction and enuresis. **Curr Opin Urol** 2000; 10:365.
8. CHANDRA M. **Voiding and its disorders in children.** In: Tractman H, Gauthier B, eds. Monographs in clinical pediatrics. The Netherlands: Harwood Academic Publishers, Amsterdam; 1998; 217.
9. MEUNIER P. Physiologie de la continence et de la miction. **Rev Prat** 1983; 33:2615-25
10. NIJMAN RJM, VAN GOOL J, YEUNG CK, HJALMAS R. Conservative management of urinary incontinence in childhood. In: ABRAMS P, CARDOZO L, KHOURY S; WEIN A (eds) **Incontinence** - 2nd International Consultation on Incontinence, 2 nd ed. Plymouth, UK: Plimbridge; 2002, 513-39.
11. VAN GOOL, TANAGHO EA. External sphincter activity and recurrent urinary tract infection in girls. **Urology** 1977; 10:348.
12. HOMSY IL. Dysfunctional voiding syndromes and vesicoureteral reflux. **Pediatr Nephrol** 1994; 8:116.
13. BLOOM DA, FAERBER G, BOMALASKI MD. Urinary incontinence in girls. **Urol Clin North Am** 1995; 22:521.
14. MCKENNA PH, HERNDON CD, CONNERY S, FERRER FA. Pelvic-floor muscle retraining for pediatric voiding dysfunction using interactive computer games. **J Urol** 1999, 162: 1056-62.
15. ZERATI FILHO M, BARROSO Jr U. **Guia prático de Urologia.** Ed. Segmento, Rio de Janeiro, 2003; 215.
16. LOTTMANN H. Enuresis treatment in France. **Scand J Urol Nephrol** Suppl. 1999; 202: 66-9.
17. KEGEL AH. Progressive resistance exercises in the functional restoration of the muscles. **Am J Obstet Gynecol** 1948; 56:238-48.
18. BURGIO KL, WHITEHEAD WE, ENGEL BT. Urinary incontinence in the elderly. **Ann Intern Med** 1985; 104:507-15.
19. SCHNEIDER MS, KING LR, SURWIT RS. Kegel exercises and childhood incontinence: a new role for an old treatment. **J Pediatrics** 1994; 124: 91-2.
20. WENNERGREN H, OBERG B. Pelvic floor exercises for children: a method of treating dysfunctional voiding. **Br J Urol.** 1995; 76: 9-15.
21. HOEBEKE P, RENSON C, PETILLON L, VANDE WALLE J, DE PAEPE H. Percutaneous Electrical Nerve Stimulation In Children With Therapy Resistant Nonneuropathic Bladder Sphincter Dysfunction: A Pilot Study. **J Urol** 2002; 168: 2605-08.
22. ANDRADE FILHO ACC. **Dor - diagnóstico e tratamento.** São Paulo: Roca; 2001. p. 43-44, 247-254, 265-268.
23. FARHAT W, BAGLI DJ, CAPOLICCHIO G, O'REILLY S, MERGUERIAN PA, KHOURY A, et al. The dysfunctional voiding scoring system: quantitative standardization of dysfunctional voiding symptoms in children. **J Urol.** 2000; 164: 1011-5.
24. ALLEN TD. Dysfunctional voiding. In: Retik AB, Cukier J, eds. **Pediatric Urology.** Baltimore: Williams and Wilkins; 1987. pg 228.
25. HOEBEKE P, WALLE JV, THEUNIS M, DE PAEPE H, OOSTERLINCK W, RENSON C. Outpatients pelvic-floor therapy in girls with daytime incontinence and dysfunctional voiding. **Urology** 1996; 48(6): 923-7.
26. MOTTA, D.M., VICTORA, C. G., HALLAL, P. C., **Investigação de disfunção miccional em uma amostra populacional de crianças de 3 a 9 anos de idade.** Coordenação de Aperfeiçoamento de Pessoal de Ensino Superior - CAPES. Universidade Federal de Pelotas, 2004.
27. DE PAEPE H, RENSON C, LAECKE, RAES A, VANDE WALLE J, HOEBEKE P. Pelvic-floor therapy and toilet training in young children with dysfunctional voiding and obstipation. **Br J Urol 2000**; 85: 889-93.
28. PORENA M, COSTATINI E, ROCIOLA W, MEARINI E. Biofeedback successfully cures detrusor-sphincter dyssynergia in pediatric patients. **J Urol** 2000; 163: 1927-31.

EFFECT OF A PHYSICAL THERAPEUTIC INTERVENTION PROTOCOL IN THE CHILD MICTURITIONAL DYSFUNCTION

ABSTRACT

The child micturitional dysfunction (CMD) is defined as na abnormal micturitional pattern for the age of a child, not being recognized before the acquisition of the daily urinary control. The urinary escapes are socially badly tolerated and understood by child and family members. Thus the individualization and application of a specific treatment is important. The objectives were verifying the effect of a physical therapeutic intervention protocol in CMD; analyzing the evolution of CMD and the changes in the level of satisfaction through the Analogical Visual Scale (AVS); comparing the score of the questionnaire of evaluation of hyperactive bladder and Escore de Farhat before and after the treatment. Clinical study of a case of CMD of a girl, 10 years old, who presented symptoms of CMD. The protocol was composed of 20 sessions, with frequency of 2 days weekly, and consisted of orientations for behavioral reeducation and physical therapeutic intervention with stretching and exercises for the muscular groups involved. The participant answered the evaluation sheet, the questionnaire for evaluation of hyperactive bladder and the Escore de Farhat, and indicated the level of satisfaction in the AVS. The physical therapeutic intervention protocol in CMD used presented benefic effect, shown by the absence of CMD in the end of the same. There was an improvement in the questionnaire of hyperactive bladder, which meant decrease of the hyperactivity. The score of the Escore de Farhat decreased gradually as the episodes of urinary losses did too. There was a change in the level of satisfaction counting that she presented dissatisfied in the presence of CMD, and satisfied when in the absence of the same. The questionnaire of hyperactive bladder, the Escore de Farhat and the level of satisfaction evoluted gradually in proportion that the case of CMD decreased, showing na important relation between the improvement of CMD and the improvement in the case of hyperactive bladder, of the Escore de Farhat and the AVS.

KEY-WORDS: Micturitional dysfunction, Children, Physical therapeutic intervention

EFFET D'UN PROTOCOLE D'INTERVENTION PHYSIOTHÉRAPEUTIQUE DANS LE DYSFONCTIONNEMENT DE L'ENFANT MICTURITIONAL

RÉSUMÉ

Le dysfonctionnement miccional infantile (DMI) est défini comme une norme miccional anormale pour l'âge de l'enfant, en n'étant pas n n'étant pas reconnu avant l'acquisition du contrôle urinaire diurne. Les évasions urinaires sain socialement mal tolérées et comprises par l'enfant et les parents. Donc c'est important l'individualização et l'application d'un

traitement spécifique. Les objectifs ont été vérifier l'effet d'un protocole d'intervention physiothérapeutique dans DMI; analyser l'évolution de DMI et la modification à le niveau de satisfaction par Escala Visuelle Analogique (EVA); comparer la ponctuation du questionnaire d'évaluation de la vessie hiperativa et Écore de Farhat avant et après le traitement. Étude clinique d'un cas de DMI d'une fille, 10 ans d'âge, qui a présenté des symptômes de DMI. Le protocole s'est composé de 20 sessions, souvent de 2 fois hebdomadaire, et a consisté d'orientations pour rééducation comportamental et intervention physiothérapeutique avec des allonges et exercices pour les groupes musculaires impliqués. La participante a répondu la fiche d'évaluation, le questionnaire pour évaluation de vessie hiperativa, et Escore de Farhat ; et il a indiqué le niveau de satisfaction dans EVA. Le protocole d'intervention physiothérapeutique dans DMI utilisée a présenté effet bénéfique, démontré par l'absence de DMI la fin du même. Il a y eu amélioration dans la ponctuation du questionnaire de vessie hiperativa, ce qui a signifié de la diminution de hiperatividade. La ponctuation de Escore de Farhat a diminué graduellement comme réduisait les épisodes de pertes urinaires. Il a y eu modification du niveau de satisfaction en étant qui s'est présentée insatisfaite quand en présence de DMI, et satisfaite quand en l'absence de la même. Le questionnaire de vessie hiperativa, Escore de Farhat et le niveau de satisfaction ont évolué graduellement dans la proportion que le tableau de DMI a diminué, en démontrant à relation importante entre l'amélioration de DMI avec l'amélioration du tableau de vessie hiperativa, de Escore de Farhat et EVA.

MOTS-CLES: Dysfonctionnement miccional, Enfants, Intervention physiothérapeutique

EFECTO DE UN PROTOCOLO DE LA INTERVENCIÓN FISIOTERAPÊUTICA EN LA DISFUNCIÓN MICCIONAL DEL NIÑO

RESUMEN

El disfunción miccional del niño (DMI) se define como anormal un estándar del miccional para la edad del niño, no siendo reconocido antes de la adquisición del control del urinário del diurne. Los escapes de los urinários se toleran social y se entienden gravemente para el niño y el familiar. Por lo tanto es importante el individualização y el uso de un tratamiento específico. Los objetivos habían sido verificar el efecto de un protocolo de la intervención del fisioterapêutica en el DMI; para analizar la evolución del DMI y la modificación en el nivel de la satisfacción para Escala visual analógico (EVA); para comparar la puntuación del cuestionario de la evaluación de la vejiga y de los apoyos del hiperativa y a Escore de Farhat antes y después el tratamiento. Estudio clínico de un caso de DMI de una muchacha, 10 años de la edad, que presentaron síntomas de DMI. El protocolo fue compuesto de 20 sesiones, de 2 veces con frecuencia semanalmente, y consistió en los orientações para la re-educación y la intervención mannering del fisioterapêutica con los allonges y los ejercicios para los grupos musculares implicados. El participante contestó a la ficha de la evaluación, al cuestionario para la evaluación de la vejiga del hiperativa, y a Escore de Farhat; e indicó el nivel de la satisfacción en EVA. El protocolo de la intervención del fisioterapêutica en el DMI usado presentó el efecto beneficioso, demostrado para la ausencia del DMI al final igual. Tenía mejora en la puntuación del cuestionario de la vejiga del hiperativa, qué significó la reducción del hiperatividade. La puntuación de Escore de Farhat disminuyó gradual como redujo los episodios de las pérdidas de los urinárias. Tenía modificación del nivel de la satisfacción que era que fue presentado insatisfecho cuando en presencia del DMI, y satisfecho cuando en ausencia de el mismo. El cuestionario de la vejiga del hiperativa, de Escore de Farhat y del nivel de la satisfacción había desarrollado gradual en el cociente que el cuadro de DMI disminuyó, demostrando la relación importante entre la mejora del DMI con la mejora del cuadro de la vejiga del hiperativa, de Escore de Farhat y EVA.

PALABRA-LLAVE: disfunción miccional, niños, intervención del fisioterapêutica

EFEITO DE UM PROTOCOLO DE INTERVENÇÃO FISIOTERAPÊUTICA NA DISFUNÇÃO MICCIONAL INFANTIL

RESUMO

A disfunção miccional infantil (DMI) é definida como um padrão miccional anormal para a idade da criança, não sendo reconhecida antes da aquisição do controle urinário diurno. Os escapes urinários são socialmente mal tolerados e compreendidos pela criança e familiares. Por isso é importante a individualização e aplicação de um tratamento específico. Os objetivos foram verificar o efeito de um protocolo de intervenção fisioterapêutica na DMI; analisar a evolução da DMI e a modificação no nível de satisfação pela Escala Visual Analógica (EVA); comparar a pontuação do questionário de avaliação da bexiga hiperativa e Escore de Farhat antes e após o tratamento. Estudo clínico de um caso de DMI de uma menina, 10 anos de idade, que apresentou sintomas de DMI. O protocolo foi composto de 20 sessões, com freqüência de 2 vezes semanal, e consistiu de orientações para reeducação comportamental e intervenção fisioterapêutica com alongamentos e exercícios para os grupos musculares envolvidos. A participante respondeu a ficha de avaliação, o questionário para avaliação de bexiga hiperativa, e o Escore de Farhat; e indicou o nível de satisfação na EVA. O protocolo de intervenção fisioterapêutica na DMI utilizado apresentou efeito benéfico, demonstrado pela ausência da DMI ao final do mesmo. Houve melhora na pontuação do questionário de bexiga hiperativa, o que significou diminuição da hiperatividade. A pontuação do Escore de Farhat diminuiu gradativamente conforme reduzia os episódios de perdas urinárias. Houve modificação do nível de satisfação sendo que apresentou-se insatisfeita quando na presença da DMI, e satisfeita quando na ausência da mesma. O questionário de bexiga hiperativa, o Escore de Farhat e o nível de satisfação evoluíram gradativamente na proporção que o quadro de DMI diminuiu, demonstrando relação importante entre a melhora da DMI com a melhora do quadro de bexiga hiperativa, do Escore de Farhat e EVA.

PALAVRAS-CHAVE: Disfunção miccional, Crianças, Intervenção fisioterapêutica.