

Anal Fissure Epidemiology and Related Diseases in Children

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ABSTRACT

Objective: After an anal fissure (AF) started, the patients avoid defecation due to their severe anal pain even if they have diarrhea, which is more evident in constipated patients. The type of functional disease that causes AF is not limited to constipation or diarrhea. This study aimed to reveal the prevalence and the clinical importance of the diseases associated with AF in all childhood age groups with the different clinical picture.

Methods: The age, sex, and accompanying AF-related diseases of the patients were collected from the database. From 7406 patients, six distinct disease groups associated with AF were identified: 1. constipation, 2. anal incontinence, 3. urinary incontinence, and 4. anal incontinence with urinary incontinence, 5. infantile colic and 6. Diaper dermatitis. We determined the symptoms in the AF-related diseases and whether the AF-related symptoms after AF treatment were reduced.

Results: Of the AF-associated 728 patients of all groups one week after AF therapy, 529 (72%) had a decline in both current disease and AF-related symptoms ($p < 0.05$, $r = 0.26$). The improvement in the first week after treatment had a stronger correlation than the improvement in the third week ($r = 0.26$ vs. 0.19).

Conclusion: We have shown that AF, which was associated with constipation, anal-urinary incontinence, IC, and DD, had critical importance in the targeted treatment of the relating illness. We recommend keeping in mind whether the AF present while planning the treatment of these six functional disorders.

INTRODUCTION

Anal fissure (AF) is a longitudinal tear or an ulcer in the anoderm of the anal canal distal to the dentate. It often brings about the anal pain during defecation with or without rectal bleeding. AF never spontaneously occurs. The classification of the AF is according to causative factors. Prolonged diarrhea and hard stool causing irritation and trauma to the anal canal are the primary and most common causes of the AF. Secondary AFs occurs in patients with previous anal surgical procedures and inflammatory bowel diseases (e.g., Crohn's disease, ulcerative colitis). AF affects all age groups with an equal incidence in both sexes.^[1-3]

After the AF has started, the patients avoid defecation due to their severe anal pain even if they have diarrhea, which is more evident in constipated patients. In other words,

a vicious cycle begins between pain and avoiding of the stool. The AF classified into two classes: acute (superficial) and chronic fissure (complicated). Anal pain which initiates a spasm of the internal anal sphincter and a high anal pressure leads to a reduction in the anodermal perfusion and an increase in ischemia in the AF as the event progresses.^[1-5] This vicious cycle could also affect adjacent structures that are connected. Namely, the pain felt in the anal region due to the anatomical closeness of the bladder and urethra to the rectum as well as the similar innervations (S2-S4 spinal nerves) of the urethral and anal sphincters causes the dysfunction occurring in both systems simultaneously. Consequently, AF can cause both bowel and indirectly bladder dysfunction (bowel-bladder dysfunction, BBD). The anal and urethral sphincters are affected because of rectal stool retention in constipation. Based on the above information, AF with vicious cycle affects these two sys-

tems and exacerbates BBD process. Children with especially constipation and fear of pain with defecation may not overcome independent bowel emptying, which indirectly impacts bladder function.^[6,7]

In infants from birth to 5 months of age, immature hepatic synthesis with reduced intraluminal bile acids takes place impaired absorption of fats and other nutrients. This process causes a change in the natural microflora in the gut. The naturally protective *Lactobacillus* and *Bifidobacterium* are substituted by higher levels of *Escherichia coli*, *Clostridium difficile*, and *Klebsiella*. Thus, the changed flora brings about to increased nutrient fermentation, more gas production, and the modified stool feature which irritates the gut. Therefore, the irritant fecal feature, which causes AF, is even present in the infantile colic (IC). The etiology of IC is not exactly known, however, in the treatment of IC has been recommended to eliminate potential allergens (milk, eggs, fish, nuts, soy, and wheat) from the diets of mothers who are breastfeeding. And also some practitioners have suggested switching bottle-fed infants to hydrolyzed formulas. However, in the literature, there is no adequate research on whether AF is essential in the mechanism of IC clinic and whether AF treatment is effective in suppressing IC symptoms.^[8-10]

Diaper dermatitis (DD) can occur due to irritation with mostly *Candida* infection in the diaper area of babies, which is constantly exposed to urine and feces in infants aged 7-12 (generally, any diapered baby in any age) months, but in the breastfed babies are less likely to experience DD.^[11,12] In fact, this fecal feature and irritation share the same clinic as the IC because of the reasons mentioned above. Despite the fact that the causes and treatment of DD are described in detail in previous publications,^[11,12] there has not been enough information in the literature about whether DD that irritating in the perianal region causes AF.

On the basis of the above clinic considerations, in this study, we aimed to investigate the diseases that cause AF excluding those of organic, including functional disorders in children and the relation of these diseases with AF.

MATERIAL AND METHODS

Data of all patients aged 0–16 years that consecutively presented in the outpatient clinic of Pediatric Surgery between the dates November 2013 – November 2017 and were diagnosed with AF were retrospectively analyzed. Patients with organic diseases of the intestines and anal canal were not taken to the work. The study was approved by the Institutional Ethics Review Board for Clinical Research (2018, 24/06). This investigation covering the three-year time interval was conducted by scanning from a retrospectively maintained institutional database. Patients with lacking data were removed from the study.

Diagnosis of patients with AF

A total of 7406 patients applied to our outpatient clinic were diagnosed with AF on their physical examination. The age, sex, and accompanying AF-related diseases of these patients were collected from the database. We determined the symptoms in the AF-related diseases and whether the AF-related symptoms after AF treatment were reduced. AF symptoms characterized by anal itching, rectal bleeding, and painful defecation were taken into consideration while searching data were collected.^[13]

Identification of the study groups

In the search for data, six disease groups were diagnostically relating with AF. The subjects who constituted these groups were patients with constipation (Group 1), anal incontinence (Group 2), and urinary incontinence (Group 3), anal incontinence with urinary incontinence (Group 4), infantile colic (Group 5) and diaper dermatitis (Group 6).

Diagnostic criteria of the groups

The following criteria were taken into consideration in determining the diseases causing AF and the anamnesis' features of the patients were compiled using these criteria:

Group 1: Constipation patient including 1 month of at least 2 of the following in infants up to 4 years of age: 1) two or fewer defecations per week, 2) at least 1 episode per week of incontinence after the acquisition of toilet training, 3) History of excessive stool retention, 4) history of painful or hard bowel movements, 5) Presence of a large fecal mass in the rectum, 6) History of large-diameter stools probably obstructing the toilet, 7*) a history of retentive posturing or excessive volitional stool retention (*:it only applies to children over 4 years old and also, mentioned above all criterions is valid for children over 4 years old). Also, the symptoms could contain irritability, decreased appetite and/or early satiety. The concomitant symptoms disappear immediately following of defecation with a large diameter.^[14]

Group 2, 3 and 4: When symptoms of patients who meet Group 1 criteria include additionally anal incontinence, urinary incontinence (daily or nocturnal) and anal incontinence with urinary incontinence (bowel-bladder dysfunction; BBD), these patients were included in the separate into functional disease group of 2, 3, and 4, respectively.

Group 5: Infant with IC had 3 symptoms including crying more than three hours per day, more than three days per week, for longer than three weeks. An essential criterion was that the baby continuously cried in the evening though he/she did not be provoked by something.^[8-10]

Group 6: DD patients were diagnosed by examining the baby's diaper area and identifying the eruptions in this area.^[11,12]

Previous diagnosis and treatment history of patients

Most of the patients (about %80) were referred from other centers and had problems with the gas-stool discharge although they were treated for IC and DD, previously. The patients were using the following medications when they applied to our outpatient clinic: oral laxative in the group 1, enema and oral laxative in the group 2,^[7] anticholinergic for bladder stabilization in the group 3,^[6] laxatives and enema in the group 4, hypoallergenic formula, herbal tea, Simethicone, Dicyclomine and Methyl-scopolamine in the group 5,^[8, 15] and antifungal as well as steroid ointment in the group 6,^[11,12] respectively.

Treatment applied to the patients with AF detected

The conventional therapy for AF being a warm sitz bath, local application of analgesic ointments (Lidocaine ointment, Anestol pomade; Sandoz Pharmaceutical Industry, Turkey) and stool softeners in case of constipation in the patient (Lactulose oral, Osmolak oral; Biofarma Pharmaceutical Industry, Turkey) was used.

Statistical analysis

We performed statistically analyze for evaluating our results using PASW Statistics for Windows version 18.0 package software (SPSS Inc., Chicago, IL, USA). When the number of variables is less than fifty, Shapiro –Wilks test was used for normality of distribution concerning the data evaluation. Otherwise, Kolmogorov-Smirnov was used. The chi-square test was performed for comparison of frequencies between or within the groups. One-way ANOVA and post-hoc multiple comparisons were conducted to compare age and gender differences among groups. The Spearman correlation test, because the groups did not show a normal distribution, was performed to determine the relationship between AF and groups. The results were explained as frequencies or mean±standard deviation (S.D), where appropriate.

RESULTS

In this study, of the total admitted 7406 patients to our outpatient clinic, 954 (12%) were included in groups of patients diagnosed with AF. AFs in the physical examination of the study groups were at multiple localizations in the anal region. The distribution of age excluding group 2 and 4 significantly differed each within-group and among groups. There was a statistically significant difference in favor of male except for groups 3 and 6 regarding gender. The majority of AF-related patients were group 1 (constipation, 44.2%) and group 5 (IC, 26%) ($p<0.05$), Table 1, Fig. 1).

There was almost no difference in the prevalence of AF among the groups ($p=0.05$; p-value that was nearly but not precisely significant). However, the number of the patients with AF for each group was significantly high ($p<0.05$). Of the AF-associated 728 patients of all groups one week after AF therapy, 529 (72%) had a decline in both current disease and AF-related symptoms ($p<0.05$, $r=0.26$). Even though some patients did not come to the control examination after three weeks of treatment, the number of patients who regressed all the symptoms was 609 as we could identify, which was statistically significant ($p<0.05$, $r=0.19$). The improvement in the first week after treatment had a stronger correlation than the improvement in the third week ($r=0.26$ vs. 0.19). The distribution of patients with AF in the study groups and the rate of decline in the symptoms of the AF-associated groups after AF therapy were as in displayed the Table 2 and Figure 2.

DISCUSSION

The physiopathological process causing to AF still is exactly unknown; however, a relation between high anal resting pressures because of increased internal anal sphincter activity and anodermal ischemia as a causative factor

Table 1. The demographic characteristics of the included patients in the study, and between and within-group differences

	n, (%)	Age** (mean±S.D)	p	n Male/Female	p
Group 1	422, (44.2)	4.68±2.89	0.00	234/188	0.02
Group 2	45, (4.7)	8.96±2.19	0.19	33/12	0.00
Group 3	62, (6.5)	8.24±2.54	0.02	30/32	0.79
Group 4	33, (3.5)	8.48±1.41	0.14	24/9	0.00
Group 5	248, (26)	3.72±1.32	0.00	154/94	0.00
Group 6	144, (15.1)	5.88±2.16	0.00	80/64	0.18
All groups	954, (100)	3.49±3.58	0.00	555/399	0.02

Study groups: patients with constipation (Group 1), anal incontinence (Group 2), and urinary incontinence (Group 3), anal incontinence with urinary incontinence (Group 4), infantile colic (Group 5) and diaper dermatitis (Group 6); *: Statistically significant; $p<0.05$; **: Age: year for groups 1, 2, 3 and 4; month for groups 5 and 6.

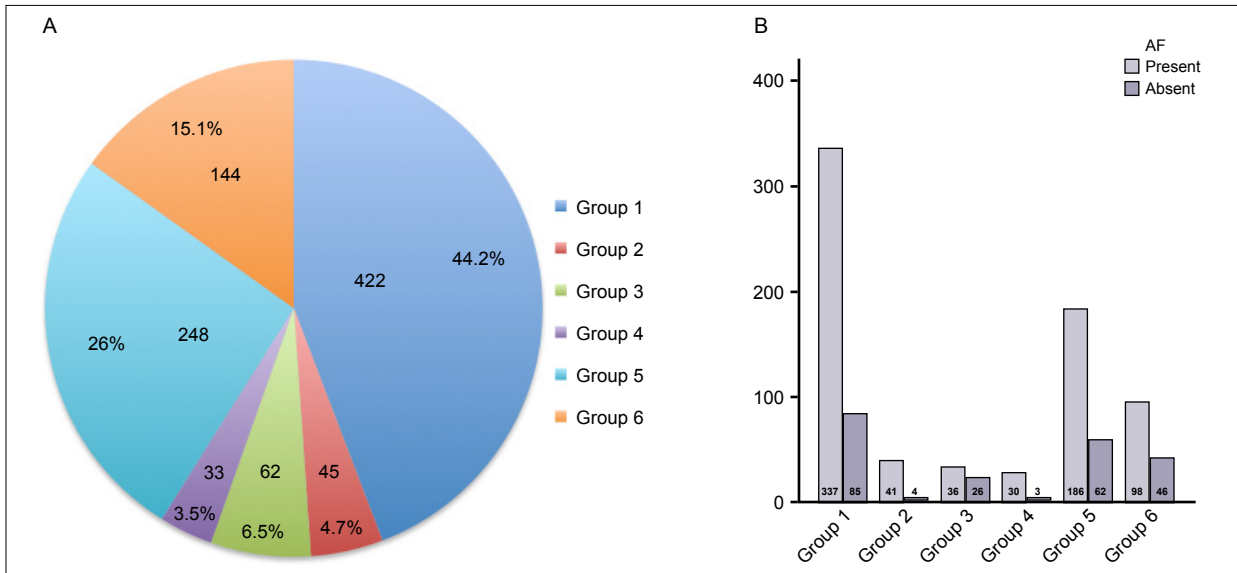


Figure 1. Distribution of AF-related diseases (A) and patients with AF (B) according to groups

Table 2. The distribution of patients with AF in the study groups and the rate of the decline in the symptoms of the AF-associated groups after AF therapy

	AF n	(%) WAF	(%) WG	p	AFT ¹ n	(%)	p	AFT ³ n	(%)	p
Group 1	337	(35)	(80)	0.00	301	(89)	0.00	318	(94)	0.00
Group 2	36	(3.8)	(91)	0.00	23	(56)	0.00	28	(68)	0.00
Group 3	41	(4.3)	(58)	0.20	16	(44)	0.00	25	(69)	0.00
Group 4	30	(3.1)	(91)	0.00	11	(36)	0.00	18	(60)	0.00
Group 5	186	(19.5)	(75)	0.00	109	(58)	0.00	136	(73)	0.00
Group 6	98	(10.3)	(68)	0.00	69	(70)	0.00	84	(85)	0.00
All groups	728	(76)		0.05*	529	(72)	0.00	609	(83)	0.00

(r=0.26**) (r=0.19**)

*: p-value that is nearly but not exactly significant. p<0.05:statistically significant; **: Spearman correlation test results; Study groups: patients with constipation (Group 1), anal incontinence (Group 2), and urinary incontinence (Group 3), anal incontinence with urinary incontinence (Group 4), infantile colic (Group 5) and diaper dermatitis (Group 6); (n) AFT: The number of patients with symptomatic improvement after one week (AFT¹) and three weeks (AFT³) of the AF treatment. WAF: within all AF groups. WG: within-group.

has been put forward recently.^[1-5,16] Mentioned causative factors for the AF in the literature were also present in our patients. Functional constipation was present in the groups 1 to 4 of our study. We diagnosed that in these admitted patients occurred the AF progressed with the symptoms of the group's diseases. We found that after a week from AF treatment, both defecation and urinary symptoms improved significantly. In the groups 1 to 4, AF healing percentage was 89, 56, 44 and 36, respectively. The improvement in the group 2 to 4 was statistically significant but the recovery rate was low. This condition could take place because of the pain in the anal region with the anatomical closeness of the bladder and urethra to the rectum. And also, as in proposed by some authors previ-

ously, the similar painful innervation (S2-S4 spinal nerves) of the urethral and anal sphincters probably caused the dysfunction occurring in both sphincters simultaneously. In addition to these suggestions, it has been addressed in previous works that children with especially constipation and fear of pain with defecation may not overcome independent bowel emptying, which indirectly impacts bladder function.^[6,7]

Zivkovic et al.^[17] showed that functional constipation was effective on symptoms in patients with daily urinary incontinence and nocturnal enuresis. In fact, in our study, the same situation named BBD was also present in group 3 patients. Differently, we showed that AF worsened these clinical symptoms and, dramatic healing began within one

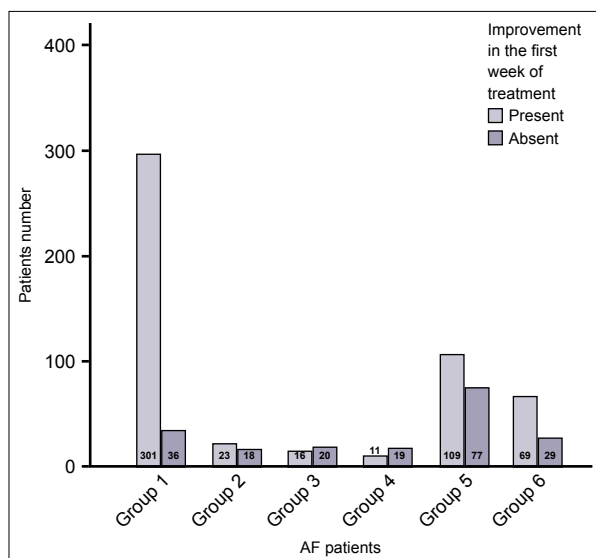


Figure 2. The distribution of the decline in the patients' symptoms one week after AF treatment according to the groups

week with the addition of AF therapy. In the literature, it was clearly reported that constipation has been associated with dysfunctional voiding, anal and urinary incontinence as well as exacerbated the symptoms of these diseases. However, it has not been adequately or at all addressed in the publications or reviews as to why the AF has worsened the clinic picture, or why it is less than the expected improvement of the BBD despite treatment.^[6,7,17-20]

Unlike constipation in IC and DD, irritant intestinal content is present instead of a hard stool as in constipation.^[8-12] Infants up to about two years old are likely to have irritation of the anoderm or diaper region due to the absence of stable flora as in existing adult intestinal content or gut microbiota (gut flora) features. The changed flora gives rise to increased nutrient fermentation, more gas production, and the modified stool feature which irritates the gut.^[8-12,21] As evidence of these features, we detected 75% and 68% AF in the group 5 and 6 (IC and DD groups), and these rates were 19.5% and 10.3% within all groups, respectively. These rates were also statistically significant ($p < 0.05$). Subclassification of IC by symptoms or suspected etiology has been partly detected in previous studies, however, which intervention being most appropriate for an infant with IC has been controversial. IC, which has an incidence of 10-40% in infants worldwide, is an annoying disease that affects both parents and patient despite the treatment.^[8-10,22] We associated this situation with AF we diagnosed. Thereafter, we realized that regularly comfortable gas-feces discharge of the IC patients after the AF treatment.

The prevalence of dysfunctional voiding estimated 4.2-46.4% in the international sources, and 9.8-15% in our country has been reported according to the definition

used, and the design applied. And also, enuresis prevalence has been published in the percentage of 15% in our country. The studies that pointed out the relationship between constipation and urinary incontinence have not reported the association of these diseases with AF.^[19,20,23-25] In our study, urinary incontinence prevalence was detected in the percentage of 6.5%, and urinary incontinence relating to constipation with AF was at the rate of 4.3%.

In the literature, although rectal bleeding and gas-stool discharge problem in infants due to AF has clearly been defined, AF in the infant with IC and DD has not described or investigated enough. Most randomized controlled trials have yielded different results and have only examined dietary or drug treatment methods.^[8-12,26,27] We showed that there was a noticeable decrease in symptoms of like these infants when they were comfortable gas-feces discharge through the AF treatment.

The most significant limitation of the work was of retrospective and patients with lacking data to be removed from the study. For the first time in the literature, we tried to show that AF, which is caused by functional disorders, affects the entire child population in six different clinical entities. However, AF which associates with these six groups should be supported by prospective studies.

CONCLUSION

We have shown that AF, which was associated with constipation, anal-urinary incontinence, IC, and DD, had critical importance in the targeted treatment of the relating illness. We recommend keeping in mind whether the AF present while planning the treatment of these six functional disorders.

Ethics Committee Approval

The study was approved by the Institutional Ethics Review Board for Clinical Research (2018, 24/06).

Informed Consent

Retrospective study.

Peer-review

Internally peer-reviewed.

Conflict of Interest

None declared.

REFERENCES

- Lund JN, Scholefield JH. Aetiology and treatment of anal fissure. *Br J Surg* 1996; 83: 1335-44.
- Klosterhalfen B, Vogel P, Rixen H et al: Topography of the inferior rectal artery: a possible cause of chronic, primary anal fissure. *Dis Colon Rectum*. 1989; 32:43-52.
- Dykes SL, Madoff RD. Benign Anorectal: Anal Fissure. In: Wolff BG, Fleshman JW, Beck DE, Pemberton JH, Wexner SD, et al., ed-

- itors. The ASCRS textbook of colon and rectal surgery. New York: Springer Science and Business Media LLC; 2007. p. 178–91.
4. Thomson JPS, Nicholls RJ, Williams CB. Anal Fissure in colorectal diseases. London: William Heinemann Medical Book Limited; 1981. p. 312.
 5. Van Outryve M. Physiopathology of the anal fissure. Acta Chir Belg. 2006; 106:517–518.
 6. Dohil R, Robers E, Verrier Jones K, Jenkins HR. Obstipation and reversible urinary tract abnormalities. Arch Dis Child 1994; 70:56-7.
 7. Chase JW, Homsy Y, Siggaard C, Sit F, Bower WF. Functional constipation in children. J Urol. 2004; 171:2641-3.
 8. Nocerino R, Pezzella V, Cosenza L, Amoroso A, Di Scala C, Amato F, Iacono G, Canani RB. The controversial role of food allergy in infantile colic: evidence and clinical management. Nutrients. 2015; 7:2015-25.
 9. Johnson JD, Cocker K, Chang E. Infantile Colic: Recognition and Treatment. Am Fam Physician. 2015; 92: 577-82.
 10. Xinias I, Analitis A, Mavroudi A, Roilides I, Lykogeorgou M, Delivoria V, Milingos V, Mylonopoulou M, Vandenplas Y. Innovative Dietary Intervention Answers to Baby Colic. Pediatr Gastroenterol Hepatol Nutr. 2017; 20:100-06.
 11. Stamatias G. N., Tierney N. K. Diaper dermatitis: Etiology, manifestations, prevention, and management. Pediatric Dermatology. 2014; 31:1–7.
 12. Evans SE, Akıncı H, Doğan S, Atakan N. Diaper Dermatitis: A Review of 63 Children. Pediatr Dermatol. 2016; 33:332-6.
 13. Doig CM. ABC of colorectal diseases. Pediatric problems-I. BMJ, 1992; 305:462-4.
 14. Longstreth GF, Thompson WG, Chey WD, Houghton LA, Mearin F, Spiller RC. Functional bowel disorders. Gastroenterology. 2006; 130:1480-91.
 15. Yakut HI, Tuñç B. Infantile colic. Turkish Journal of Pediatric Disease 2007; 1:57-63.
 16. Poh A, Tan KY, Seow Choen F. Innovations in chronic anal fissure treatment: a systematic review. World J Gastrointest Surg. 2010; 27:231–41.
 17. Zivkovic VD, Lazovic M, Stankovic I. et al. Scintigraphy evaluation of the types of functional constipation in children with bowel bladder dysfunction. J Pediatr Urol. 2014; 10:1111-6.
 18. De Paep H, Renson C, Van Laecke E, Raes A, Vande Walle J, Hoebeke P. Pelvic-floor therapy and toilet training in young children with dysfunctional voiding and obstipation. BJU Int. 2000; 85:889-93.
 19. Sarici H, Telli O, Ozgur BC, Demirbas A, Ozgur S, Karagoz MA. Prevalence of nocturnal enuresis and its influence on quality of life in school-aged children. J Pediatr Urol. 2016; 12: e1–e6.
 20. Haid B, Tekgöl S. Primary and Secondary Enuresis: Pathophysiology, Diagnosis, and Treatment. Eur Urol Focus. 2017; 3:198-206.
 21. Mackie RI, Sghir A, Gaskins HR. Developmental microbial ecology of the neonatal gastrointestinal tract. Am J Clin Nutr. 1999; 69:1035-45.
 22. Gutiérrez C, Jimenez-Escobar I, López-Velázquez G. Efficacy of *Lactobacillus reuteri* DSM 17938 for infantile colic: Systematic review with network meta-analysis. Medicine (Baltimore). 2017; 96:e9375.
 23. Sinha S. Dysfunctional voiding: A review of the terminology, presentation, evaluation and management in children and adults. J Urol. 2011; 27: 437–47.
 24. Carman KB, Ceran O, Kaya C, Nuhoglu C, Karaman MI. Nocturnal enuresis in Turkey: prevalence and accompanying factors in different socioeconomic environments. Urol Int 2008; 80: 362–6.
 25. Özkan S, Durukan E, Iseri E, Gürocak S, Maral I, Bumin MA. Prevalence and risk factors of monosymptomatic nocturnal enuresis in Turkish children. Indian J Urol 2010; 26:200–5.
 26. Pongdetudom K. No difference in prevalence of anal fissure among infants who are breast-fed, formula-fed and mixed-fed. J Trop Pediatr. 2011; 57:499-500.
 27. Garrison MM, Christakis DA. A systematic review of treatments for infant colic. Pediatrics. 2000; 106:184-90.

Çocuklarda Anal Fissürün Epidemiyolojisi ve İlişkili Olduğu Hastalıklar

Amaç: Anal fissür (AF) başladıktan sonra, kabızlığı olanlarda daha belirgin olan şiddetli anal ağrı nedeniyle, hastalar ishal olsalar bile defekasyondan kaçınırlar. AF'ye neden olan fonksiyonel hastalığın tipi, kabızlık veya ishal ile sınırlı değildir. Bu çalışma, tüm çocukluk çağı yaş gruplarında AF ile ilişkili hastalıkların prevalansını ve klinik önemini, farklı klinik tablolarla açıklığa kavuşturmayı amaçlamıştır.

Gereç ve Yöntem: Hastaların yaşı, cinsiyeti ve AF ile ilişkili hastalıkları veritabanından toplandı. Yedi bin dört yüz altı hastadan AF ile ilişkili altı farklı hastalık grubu belirlendi: 1. kabızlık, 2. anal inkontinans, 3. üriner inkontinans, 4. anal inkontinansla birlikte üriner inkontinans, 5. infantil kolik ve 6. diaper dermatit. AF ile ilişkili hastalıklarda semptomları ve AF tedavisinden sonra AF ile ilişkili semptomların gerileyip gerilemediğini belirledik.

Bulgular: AF tedavisinden bir hafta sonra, tüm grupların AF ile ilişkili 728 hastasından 529'unda (%72) hem mevcut hastalıkta hem de AF ile ilişkili semptomlarında azalma vardı ($p<0.05$, $r=0.26$). Tedaviden sonraki ilk haftadaki iyileşme üçüncü haftadaki iyileşmeden daha güçlü bir korelasyona sahipti ($r=0.26$ 'ya karşılık 0.19).

Sonuç: Kabızlık, anal-üriner inkontinans, IC ve DD ile ilişkili AF'nin, ilişkili olduğu hastalığın hedeflenen tedavisinde kritik öneme sahip olduğunu gösterdik. Bu altı fonksiyonel hastalığın tedavisini planlarken AF'nin mevcut olup olmadığını göz önünde bulundurulmasını öneriyoruz.

Anahtar Sözcükler: Anal fissür; çocuk; epidemiyoloji; süt çocuğu.