



ATEŞLİ İDRAR YOLU ENFEKSİYONU İLE BAŞVURAN ANOREKTAL MALFORMASYONLU 8 YAŞINDA KIZ HASTA

Ömer Barış YÜCEL¹

Sekiz yaşında kız hasta, ateşli idrar yolu enfeksiyonu (İYE) nedeniyle başvurdu. Alınan anamnezde; yenidoğan döneminde perineal fistüllü anorektal malformasyon (ARM) sebebi ile kolostomi açıldığı, definitif cerrahi sonrası kolostominin kapatıldığı, ürolojik ve nefrolojik açıdan takipsiz olduğu, tuvalet eğitimini 3 yaşında tamamladığı ancak son dönemde idrar kaçırmalarının olduğu, daha önce 2 kere İYE nedeni ile antibiyotik tedavisi aldığı ve gergin omurilik sebebi ile 3 yıl önce opere olduğu öğrenildi.

Soru 1. Anorektal malformasyon nedir?

Genel olarak “imperfore anüs” olarak isimlendirilen bir grup hastalığın varyasyonlarıdır. Rektum, normal yer ve boyuttaki bir anal açıklık yerine, anal kasların önünde perineuma veya ürogenital sisteme bir fistül şeklinde açılır ya da hiç açılmaz.

Erkeklerde daha sık olmakla birlikte (%57 vs %43), 2500-5000 canlı doğumda bir görüldüğü bildirilmiştir^{1,2}. İkinci bir ARM’li çocuk sahibi olma insidansı %1dir³.

Üriner sistem, genital sistem ve boşaltım sistemi, gestasyonel 4. ve 12. haftalar arasında ürorektal septumun kloakayı bölmeye ayrılır. Oluşumu ile ilgili birden fazla teori olmasına rağmen, genel olarak bu bölünme sürecindeki kusurların, ARM’ye yol açtığı düşünülmektedir. Eş zamanlı olarak üreterik tomurcuğun, Wolf ve Müllerian kanallarının da

¹ Uzm. Dr., Ege Üniversitesi Tıp Fakültesi, Çocuk Cerrahisi AD., Çocuk Ürolojisi BD., omer.baris.yucel@ege.edu.tr



Kaynaklar

1. Cuschieri A, Group EW. Anorectal anomalies associated with or as part of other anomalies. *American Journal of Medical Genetics*. 2002;110(2):122-130. doi:<https://doi.org/10.1002/ajmg.10371>
2. Levitt MA, Pena A. Anorectal malformations. *Orphanet J Rare Dis*. 2007;2:33. doi:10.1186/1750-1172-2-33
3. Falcone RA, Jr., Levitt MA, Pena A, ve ark. Increased heritability of certain types of anorectal malformations. *J Pediatr Surg*. Jan 2007;42(1):124-7; discussion 127-8. doi:10.1016/j.jpedsurg.2006.09.012
4. Stephens FD, Smith ED, Hutson J. *Congenital Anomalies of the Kidney, Urinary and Genital Tracts*, Second Edition. Taylor & Francis; 2001.
5. Bonnot O, Vollset SE, Godet PF, ve ark. [In utero exposure to benzodiazepine. Is there a risk for anal atresia with lorazepam?]. *Encephale*. Nov-Dec 2003;29(6):553-9. Exposition in utero au lorazepam et atresie anale: signal epidemiologique.
6. Mundt E, Bates MD. Genetics of Hirschsprung disease and anorectal malformations. *Semin Pediatr Surg*. May 2010;19(2):107-17. doi:10.1053/j.sempedsurg.2009.11.015
7. Pitera JE, Smith VV, Woolf AS, ve ark. Embryonic gut anomalies in a mouse model of retinoic Acid-induced caudal regression syndrome: delayed gut looping, rudimentary cecum, and anorectal anomalies. *Am J Pathol*. Dec 2001;159(6):2321-9. doi:10.1016/S0002-9440(10)63082-9
8. Holschneider AM, Hutson JM. *Anorectal Malformations in Children: Embryology, Diagnosis, Surgical Treatment, Follow-up*. Springer Berlin Heidelberg; 2009.
9. Docimo SG, Canning D, El-Khoury AE, ve ark. *The Kelalis--King--Belman Textbook of Clinical Pediatric Urology*. 2018.
10. Boemers TM, Bax KM, Rovekamp MH, ve ark. The effect of posterior sagittal anorectoplasty and its variants on lower urinary tract function in children with anorectal malformations. *J Urol*. Jan 1995;153(1):191-3. doi:10.1097/00005392-199501000-00075
11. Bjoersum-Meyer T, Kaalby L, Lund L, ve ark. Long-term Functional Urinary and Sexual Outcomes in Patients with Anorectal Malformations-A Systematic Review. *Eur Urol Open Sci*. Mar 2021;25:29-38. doi:10.1016/j.euros.2021.01.007
12. Minneci PC, Kabre RS, Mak GZ, ve ark. Screening practices and associated anomalies in infants with anorectal malformations: Results from the Midwest Pediatric Surgery Consortium. *J Pediatr Surg*. Jun 2018;53(6):1163-1167. doi:10.1016/j.jpedsurg.2018.02.079
13. Stoll C, Alembik Y, Dott B, ve ark. Associated malformations in patients with anorectal anomalies. *Eur J Med Genet*. Jul-Aug 2007;50(4):281-90. doi:10.1016/j.ejmg.2007.04.002
14. McLorie GA, Sheldon CA, Fleisher M, ve ark. The genitourinary system in patients with imperforate anus. *J Pediatr Surg*. Dec 1987;22(12):1100-4. doi:10.1016/s0022-3468(87)80717-0
15. Hong AR, Acuna MF, Pena A, ve ark. Urologic injuries associated with repair of anorectal malformations in male patients. *J Pediatr Surg*. Mar 2002;37(3):339-44. doi:10.1053/jpsu.2002.30810
16. Salvatierra O, Jr., Millan M, Concepcion W. Pediatric renal transplantation with considerations for successful outcomes. *Semin Pediatr Surg*. Aug 2006;15(3):208-17. doi:10.1053/j.sempedsurg.2006.03.007
17. Metts JC, 3rd, Kotkin L, Kasper S, ve ark. Genital malformations and coexistent urinary tract or spinal anomalies in patients with imperforate anus. *J Urol*. Sep 1997;158(3 Pt 2):1298-300. doi:10.1097/00005392-199709000-00168
18. Ratan SK, Rattan KN, Pandey RM, ve ark. Associated congenital anomalies in patients with anorectal malformations--a need for developing a uniform practical approach. *J Pediatr Surg*. Nov 2004;39(11):1706-11. doi:10.1016/j.jpedsurg.2004.07.019
19. Rickwood AM, Spitz L. Primary vesicoureteric reflux in neonates with imperforate anus. *Arch Dis Child*. Feb 1980;55(2):149-50. doi:10.1136/ad.55.2.149



20. Warne SA, Wilcox DT, Ransley PG. Long-term urological outcome of patients presenting with persistent cloaca. *J Urol.* Oct 2002;168(4 Pt 2):1859-62; discussion 1862. doi:10.1097/01.ju.0000030712.17096.0d
21. Mollitt DL, Schullinger JN, Santulli TV, ve ark. Complications at menarche of urogenital sinus with associated anorectal malformations. *J Pediatr Surg.* Jun 1981;16(3):349-52. doi:10.1016/s0022-3468(81)80693-8
22. Sanchez S, Ricca R, Joyner B, ve ark. Vesicoureteral reflux and febrile urinary tract infections in anorectal malformations: a retrospective review. *J Pediatr Surg.* Jan 2014;49(1):91-4; discussion 94. doi:10.1016/j.jpedsurg.2013.09.031
23. Binu V, Dash V, Bawa M, ve ark. Role of urodynamics in male patients of high-anorectal malformations: a prospective study. *Pediatr Surg Int.* Apr 2021;37(4):461-468. doi:10.1007/s00383-020-04835-5
24. Pena A, Hong A. Advances in the management of anorectal malformations. *Am J Surg.* Nov 2000;180(5):370-6. doi:10.1016/s0002-9610(00)00491-8
25. Warne SA, Godley ML, Wilcox DT. Surgical reconstruction of cloacal malformation can alter bladder function: a comparative study with anorectal anomalies. *J Urol.* Dec 2004;172(6 Pt 1):2377-81; discussion 2381. doi:10.1097/01.ju.0000145201.94571.67
26. Boemers TM, Beek FJ, van Gool JD, ve ark. Urologic problems in anorectal malformations. Part 1: Urodynamic findings and significance of sacral anomalies. *J Pediatr Surg.* Mar 1996;31(3):407-10. doi:10.1016/s0022-3468(96)90748-4
27. Mosiello G, Capitanucci ML, Gatti C, ve ark. How to investigate neurovesical dysfunction in children with anorectal malformations. *J Urol.* Oct 2003;170(4 Pt 2):1610-3. doi:10.1097/01.ju.0000083883.16836.91
28. Giuliani S, Midrio P, De Filippo RE, ve ark. Anorectal malformation and associated end-stage renal disease: management from newborn to adult life. *J Pediatr Surg.* Mar 2013;48(3):635-41. doi:10.1016/j.jpedsurg.2012.10.073
29. De Filippo RE, Shaul DB, Harrison EA, ve ark. Neurogenic bladder in infants born with anorectal malformations: comparison with spinal and urologic status. *J Pediatr Surg.* May 1999;34(5):825-7; discussion 828. doi:10.1016/S0022-3468(99)90380-9
30. Ralph DJ, Woodhouse CR, Ransley PG. The management of the neuropathic bladder in adolescents with imperforate anus. *J Urol.* Aug 1992;148(2 Pt 1):366-8. doi:10.1016/s0022-5347(17)36598-9
31. Boemers TM, de Jong TP, van Gool JD, ve ark. Urologic problems in anorectal malformations. Part 2: functional urologic sequelae. *J Pediatr Surg.* May 1996;31(5):634-7. doi:10.1016/s0022-3468(96)90663-6
32. Kyrklund K, Pakarinen MP, Taskinen S, ve ark. Bowel function and lower urinary tract symptoms in males with low anorectal malformations: an update of controlled, long-term outcomes. *Int J Colorectal Dis.* Feb 2015;30(2):221-8. doi:10.1007/s00384-014-2074-9
33. Iwai N, Deguchi E, Kimura O, ve ark. Social quality of life for adult patients with anorectal malformations. *J Pediatr Surg.* Feb 2007;42(2):313-7. doi:10.1016/j.jpedsurg.2006.10.004
34. Rintala RJ, Lindahl HG. Posterior sagittal anorectoplasty is superior to sacroperineal-sacroabdominoperineal pull-through: a long-term follow-up study in boys with high anorectal anomalies. *J Pediatr Surg.* Feb 1999;34(2):334-7. doi:10.1016/s0022-3468(99)90203-8
35. Davies MC, Liao LM, Wilcox DT, ve ark. Anorectal malformations: what happens in adulthood? *BJU Int.* Aug 2010;106(3):398-404. doi:10.1111/j.1464-410X.2009.09031.x
36. Goossens WJ, de Blaauw I, Wijnen MH, ve ark. Urological anomalies in anorectal malformations in The Netherlands: effects of screening all patients on long-term outcome. *Pediatr Surg Int.* Oct 2011;27(10):1091-7. doi:10.1007/s00383-011-2959-4
37. Giuliani S, Grano C, Aminoff D, ve ark. Transition of care in patients with anorectal malformations: Consensus by the ARM-net consortium. *J Pediatr Surg.* Nov 2017;52(11):1866-1872. doi:10.1016/j.jpedsurg.2017.06.008