

GENERAL ARTICLE**APPROACH TO CHRONIC DIARRHEA IN CHILDREN*****Viswanathan M Sivaramakrishnan**

Abstract: *Chronic diarrhea remains a significant challenge for pediatricians, particularly in developing countries where diverse causes need to be considered and managed effectively. The causes of chronic diarrhea include food allergies, congenital diarrheas, enteropathies and inflammatory bowel disease, including very early onset inflammatory bowel disease. Advanced diagnostic modalities including detailed stool analysis, endoscopy and genetic testing are available in many centers across the country and worldwide. A thorough approach is the need of the hour to ensure timely evaluation and management of chronic diarrhea.*

Keywords: *Chronic, Diarrhea, Children, Enteropathies.*

Points to Remember

- *Exclusive breast feeding and adherence to vaccine schedule as per National Immunisation Program are recommended to prevent infections which can contribute to chronic diarrhea.*
- *Obtaining a detailed dietary history is crucial, as fruit juices high in sorbitol and other indigestible carbohydrates can cause osmotic diarrhea.*
- *It is important to distinguish true diarrhea from fecal incontinence due to constipation, as the management for the two differs significantly.*
- *Evaluation for underlying immune deficiencies in relevant cases and management of undernutrition in chronic diarrheas are very important.*
- *Some children would need Upper GI Endoscopy and / or Ileo-colonoscopy and hence early referral to pediatric gastroenterologist is advisable.*
- *CMPA is diagnosed only when there is resolution of symptoms after elimination of dairy products and recurrence of symptoms on re-challenge with dairy products.*

References

1. Lakshminarayanan S, Jayalakshmy R. Diarrheal diseases among children in India: Current scenario and future perspectives. *J Nat Sci Biol Med.* 2015; 6(1):24-8. doi: 10.4103/0976-9668.149073.
2. Mathai J, Raju B, Bavdekar A; Pediatric Gastroenterology Chapter, Indian Academy of Pediatrics. Chronic and persistent diarrhea in infants and young children: status statement. *Indian Pediatr.* 2011; 48(1):37-42. doi: 10.1007/s13312-011-0018-9.
3. Schiller LR, Pardi DS, Sellin JH. Chronic Diarrhea: Diagnosis and Management. *Clin Gastroenterol Hepatol.* 2017; 15(2):182-193.e3. doi: 10.1016/j.cgh.2016.07.028. Epub 2016 Aug 2.
4. Zella GC, Israel EJ. Chronic diarrhea in children. *Pediatr Rev.* 2012 ;33(5):207-17; quiz 217-8. doi: 10.1542/pir.33-5-207.

* Senior Consultant Pediatric Gastroenterologist and Hepatologist,
Therapeutic Endoscopist and Pediatric Liver Transplant Physician,
Apollo Children's Hospital, Chennai
email: vichums@rediffmail.com

5. Hizarcioglu-Gulsen H, Saltik-Temizel IN, Demir H, Gurakan F, Ozen H, Yuce A. Intractable diarrhea of infancy: 10 years of experience. *J Pediatr Gastroenterol Nutr.* 2014 ;59(5):571-6. doi: 10.1097/MPG.0000000000000485.
6. Yachha SK, Misra S, Malik AK, Nagi B, Mehta S. Spectrum of malabsorption syndrome in north Indian children. *Indian J Gastroenterol.* 1993 ;12(4):120-5.
7. Poddar U, Yachha SK, Krishnani N, Srivastava A. Cow's milk protein allergy: an entity for recognition in developing countries. *J Gastroenterol Hepatol.* 2010; 25(1):178-82. doi: 10.1111/j.1440-1746.2009.06017.x. Epub 2009 Oct 9.
8. Mantoo MR, Malik R, Das P, Yadav R, Nakra T, Chouhan P. Congenital Diarrhea and Enteropathies in Infants: Approach to Diagnosis. *Indian J Pediatr.* 2021; 88(11):1135-1138. doi: 10.1007/s12098-021-03844-z. Epub 2021 Jul 22.
9. Thiagarajah JR, Kamin DS, Acra S, Goldsmith JD, Roland JT, Lencer WI, et al; PediCODE Consortium. Advances in Evaluation of Chronic Diarrhea in Infants. *Gastroenterology.* 2018 ;154(8):2045-2059.e6. doi: 10.1053/j.gastro.2018.03.067. Epub 2018 Apr 12.
10. Benninga MA, Faure C, Hyman PE, St James Roberts I, Schechter NL, Nurko S. Childhood Functional Gastrointestinal Disorders: Neonate/Toddler. *Gastroenterology.* 2016 15:S0016-5085(16)00182-7. doi: 10.1053/j.gastro.2016.02.016. Epub ahead of print
11. Kasýrga E. The importance of stool tests in diagnosis and follow-up of gastrointestinal disorders in children. *Turk Pediatri Ars.* 2019 25; 54(3):141-148. doi: 10.14744/TurkPediatriArs.2018.00483.
12. Ensari A, Kelsen J, Russo P. Newcomers in paediatric GI pathology: childhood enteropathies including very early onset monogenic IBD. *Virchows Arch.* 2018; 472(1):111-123. doi: 10.1007/s00428-017-2197-9. Epub 2017 Jul 17.
13. Uhlig HH, Schwerd T, Koletzko S, Shah N, Kammermeier J, Elkadri A, et al. COLORS in IBD Study Group and NEOPICS. The diagnostic approach to monogenic very early onset inflammatory bowel disease. *Gastroenterology.* 2014 ;147(5):990-1007.e3. doi: 10.1053/j.gastro.2014.07.023. Epub 2014 Jul 21.
14. Joshua S. V. da Silva DO, Seres DS, Sabino K, Adams SC, Berdahl GJ, Citty SW, et al. Parenteral Nutrition Safety and Clinical Practice Committees, American Society for Parenteral and Enteral Nutrition. ASPEN Consensus Recommendations for Refeeding Syndrome. *Nutr Clin Pract.* 2020; 35(2):178-195. doi: 10.1002/ncp.10474. Epub 2020 Mar 2. Erratum in: *Nutr Clin Pract.* 2020 Jun; 35(3):584-585.
15. Matthai J, Mohan N, Viswanathan MS, Shanmugam N, Bharadia L, Bhatnagar S, et al. Therapeutic Enteral Formulas in Children. *Indian Pediatr.* 2020 15; 57(4): 343-348. Epub 2020 Feb 5.
16. Matthai J, Sathiashekharan M, Poddar U, Sibal A, Srivastava A, Waikar Y, et al. Recommendations - Guidelines on Diagnosis and Management of Cow's Milk Protein Allergy. *Indian Pediatr.* 2020 Aug 15; 57(8):723-729.