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MANAGEMENT OF PERSISTENT AND CHRONIC DIARRHEA - PRACTICAL ISSUES

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Abstract: In the West, the term ‘chronic diarrhea’ applies to diarrheal illness that is 14 days or more in duration, irrespective of the underlying etiology. However, in developing countries, such as in the South Asian region with a high prevalence of infectious diarrhea, experts in the field recognized the need to differentiate chronic diarrhea of infective etiology from non-infectious causes of chronic diarrhea. Towards this objective, the World Health Organization has recognized the importance of coining a separate term for addressing chronic diarrhea of infective etiology. The currently accepted WHO definition of “Persistent Diarrhea” is any diarrheal illness lasting 14 days or more, abrupt in onset and due to infectious etiology. This is to be clearly distinguished from “Chronic non-infectious diarrhea” which is also 14 days or more in duration but insidious in onset and due to causes which are non-infective. This includes specific food allergy and intolerance, metabolic causes of osmotic and secretory diarrhea and intestinal disorders presenting as malabsorption due to associated villous atrophy of non-infective origin. This manuscript discusses the approach to management of persistent diarrhea in detail owing to the fact that this presentation of chronic diarrhea is very relevant to countries such as India and subsequently briefly addresses specific causes of non-infectious chronic diarrhea and approach to diagnosis and management.

Keywords: Diarrhea, Persistent, Chronic, Diagnosis, Management.

Points to Remember

- Diarrhea lasting for more than 14 days is chronic diarrhea.
- Persistent diarrhea is usually acute in onset, often infectious in etiology and curable unlike chronic which is often insidious in onset, non infectious in etiology and controllable.
- Secondary lactose intolerance, persistence of gut or extra gut infections and malnutrition are the common causes of persistent diarrhea in our country.
- Management of persistent diarrhea include proper diet therapy and trace element supplementation in malnourished children.
- Exclusive breast feeding, introduction of complimentary feeding at proper time, measle vaccination, improvement in personal hygiene and supplementation of vitamin A are some of preventive strategies of persistent diarrhea in developing nations.
- Etiological workup of chronic diarrhea should be meticulous.

References


A REVIEW OF CONSTIPATION IN CHILDREN

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Abstract: Childhood constipation is a common problem and functional constipation forms the major bulk. Careful history and examination is usually sufficient to diagnose functional constipation. Presence of red flags should raise a suspicion of underlying organic etiology. Polyethylene glycol, which is an osmotic laxative, is the first line agent for both disimpaction as well as maintenance therapy. Lactulose can be used in case of non-availability or intolerance to polyethylene glycol. Any precipitating factor needs to be identified and corrected. Prolonged treatment is necessary with gradual tapering before stopping. Proper counseling, timely follow-up and compliance to treatment results in good outcome.

Keywords: Constipation, Children, Polyethylene glycol

Points to Remember

- Functional constipation is the most common cause of chronic constipation in children.
- Presence of red flag signs should raise the suspicion of organic etiology.
- Polyethylene glycol, an osmotic laxative is the first line of treatment for children with functional constipation.
- Lactulose can be used in case of non-availability or intolerance to polyethylene glycol.
- Treatment needs to be continued for long period with tapering before stoppage.

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AUTOIMMUNE HEPATITIS

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Abstract: Autoimmune hepatitis is one of the common causes of acute and chronic liver disease in children and adolescents. It has a varied presentation and if detected early, can be treated effectively. Early diagnosis is the most important which may not be easy in many cases. This article outlines the clinical presentations, scores for diagnosis and outlines the treatment aspects of this condition. When medical management fails, liver transplantation is the only option.

Keywords: Liver diseases, Autoimmune, Simplistic scoring.

Points to Remember

• Autoimmune hepatitis is seen more in girls.
• This condition is suspected whenever transaminases are fluctuating.
• Clinical features can mimic any form of hepatitis.
• Autoantibodies form an important part of the work up but they are not diagnostic.
• Liver biopsy should be done.
• If treated appropriately, it can be life saving.
• Without proper treatment decompensation can occur in few requiring liver transplant.

References


PORTAL HYPERTENSION

*Sumathi Bavanandam

Abstract: Portal hypertension is the commonest cause of recurrent significant upper gastrointestinal bleed in children. Extra-hepatic portal venous obstruction followed by cirrhosis are the common causes of portal hypertension. Bleed is well tolerated in non-cirrhotic portal obstruction unlike cirrhosis, where features of hepatic decompensation like ascites and encephalopathy are common following variceal bleed. Good history and physical examination are important in identifying the level of portal hypertension. Effective management of acute variceal bleed is essential to prevent bleed related mortality. Endoscopy after hemodynamic stabilisation has both diagnostic and therapeutic role in managing children with portal hypertensive bleeds.

Keywords: Portal hypertension, Variceal bleed, Endotherapy, Children.

Points to Remember

- Portal hypertension is the commonest cause of recurrent major gastrointestinal bleed.
- Good history and thorough physical examination is an essential step in evaluation of portal hypertension.
- EHPVO is the commonest type of portal hypertension followed by cirrhosis and bleed due to EHPVO is well tolerated unlike cirrhosis.
- Endoscopy is to be done after hemodynamic stabilisation and has diagnostic and therapeutic role.
- Effective management of acute variceal bleed is important to avoid bleed related mortality.
- Outcome of portal hypertension is dependent upon underlying liver status and regular follow up is a must.

References


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UPPER GASTROINTESTINAL BLEEDING IN CHILDREN

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Abstract: Upper gastrointestinal bleeding in children may be life threatening. Frequent causes of upper gastrointestinal bleeding in children include variceal hemorrhage (most commonly extra-hepatic portal venous obstruction in Indian setting) and mucosal lesions (gastric erosion and ulcer secondary to drug intake). All patients should be evaluated for the source, degree and possible cause of the bleeding. A complete and thorough history and physical examination is therefore vital. Upper gastrointestinal endoscopy is the first line diagnostic procedure. The goals of therapy in a child with gastrointestinal bleeding should be directed towards hemodynamic resuscitation, cessation of bleeding from source and prevention of future episodes. Proton pump inhibitor and H2 receptor antagonists (both oral and parenteral) are the mainstay in the treatment of bleeding from mucosal lesion. Variceal bleeds are managed by infusion of vasoactive agents like octreotide and therapeutic emergency endoscopy after initial hemodynamic stabilization of the patient.

Keywords: Varices, Endoscopy, Proton pump inhibitor, H2 receptor antagonists, Octreotide.

Points to Remember

- Upper gastrointestinal (UGI) bleeding can present with hematemesis and/or melena.
- Although melena suggests UGI bleeding, it may also occur in patients with a proximal lower GI source.
- Patients with brisk UGI bleeding and rapid intestinal transit time may present with hematochezia, particularly if they are infants or toddlers.
- The initial evaluation of the patient with UGI bleeding involves an assessment of hemodynamic stability and resuscitation, if indicated.
- Mucosal bleeds are more common in developed countries while variceal bleeds are more common in developing ones.
- Nasogastric or orogastric lavage may be performed in patients with clinically significant UGI bleeding to confirm the location and to remove fresh blood or particulate matter from the stomach to facilitate endoscopy.
- Hemodynamically unstable children or those with large volume bleeding should be given parenteral proton pump inhibitors.
- Patients with documented variceal bleed should be given infusion of vasoactive agents like octreotide.
- Endoscopy usually permits identification of the bleeding source, allows for risk stratification regarding the likelihood of continued bleeding, and in some cases permits therapeutic intervention.

References


LIVER TRANSPLANTATION - CURRENT TRENDS

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Abstract: Liver is now the second most commonly transplanted organ. Published data from across the world have consistently shown 10-year survival figures of above 90% and 20 year survival close to 85%. Recent published data from India has mirrored similar success and results of programs worldwide. As of today, the expected survival from a liver transplantation is close to 95%. This has largely been possible because of improvements in immunosuppression, intensive care, better surgical techniques and timely referral for transplant due to enhanced acceptability amongst the medical fraternity. Indications include acute and chronic liver failure resulting in end stage liver disease and certain metabolic disorders with or without intact liver function. Newer surgical innovations including split and monosegmental grafts have helped expand the available donor pool. Exhaustive pretransplant donor assessments are mandatory to ensure donor safety and successful outcome. Pretransplant recipient optimization includes immunization, addressing micro and macronutrient deficiencies and eradication of any infections. Postoperative optimal intensive care forms the cornerstone for good outcomes. Sepsis continues to be one of the leading complications in the post transplant period. Acute rejection is frequent though chronic rejection and biliary leaks are relatively fewer in children. Triple immunosuppression with steroids, calcineurine inhibitors and mycophenolate mofetil has greatly reduced the incidence of rejection. Feasibility of weaning patients completely off immunosuppression is an area of active research.

Keywords: Liver Transplantation, Children, Immunosuppression.

Points to Remember

- Liver transplantation is now routinely performed in many centres across India.
- Most liver transplants in India are from living related donors.
- The most common indication for liver transplant is biliary atresia.
- Current 1-year survival following living related transplant is close to 95%.
- Triple immunosuppression with steroids, calcineurine inhibitors and immunomodulators have greatly reduced the incidence of rejection.

References


WILSON DISEASE

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Abstract: Wilson disease is an autosomal recessive disorder due to a defect of copper transport by the hepatic lysosomes affecting most commonly children or young adults. Excess copper deposition in the liver, brain, kidneys and the skeletal system runs an invariably fatal course and needs to be managed effectively. Multiple modalities are now available in the diagnosis, genetics, neuroimaging and management. Novel mutations have been increasingly reported in Wilson both in Indian subcontinent and abroad. Treatment choices includes zinc, trientin, penicilamine and liver transplant. Penicillamine once a ‘gold standard’ for treatment, has been debated by experts and lacks a general consensus globally.

Keywords: Ceruloplasmin, Copper, Penicillamine, Zinc.

Points to Remember

- Wilson disease is a conundrum and has a multifaceted presentation.
- Jaundice is a common hepatic manifestation, but may be associated with a variety of neurological symptoms.
- One should look for other system involvements such as ophthalmological, hematological and renal manifestations.
- Early diagnosis and treatment will slow the progression of the disease and may reduce morbidity. The treatment is generally well tolerated and ‘compliance’ is the key factor.
- Screening of siblings is a must for all children with Wilson disease.
- Liver transplant aims to be curative.

References


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PHARMACOTHERAPY IN AUTISM

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Abstract: Autism spectrum disorder is a heterogeneous neurodevelopmental disorder affecting social communication and behavior. Though symptoms can be seen from as early as 6 months of age, most are picked up between 2-3 years of age. Even today, there is no clarity regarding the use of medications in autism spectrum disorder. Research is yet to narrow in on drugs that target the core symptoms of this multifaceted illness.

Keywords: Autism spectrum disorder, Core symptoms, Medications.

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CHILDHOOD DERMATOPHYTOSIS

Madhu R

Abstract: Dermatophytosis is a superficial fungal infection of the keratinized tissues of skin, hair and nail caused by dermatophytes belonging to the three genera Trichophyton, Microsporum and Epidermophyton. There has been an increase in the prevalence of chronic and recurrent dermatophytosis in India over the last few years. This scenario which is predominantly seen in adults has resulted in the simultaneous increase in the frequency of Tinea corporis and Tinea cruris among children affecting even infants and neonates. This change in the trend has been mainly limited to the glabrous skin. Counseling regarding the general measures and the compliance to treatment forms the cornerstone for management of dermatophytosis. Localised lesions are treated with topical antifungal agents. Indications for systemic therapy include the presence of extensive lesions and involvement of hair and nail.

Keywords: Tinea corporis, Tinea capitis, Tinea unguium, Children, Treatment, Resistance

Points to Remember

• There has been an increase in the incidence of dermatophytosis in infants and children over the last few years in India, concomitant with a rising scenario of dermatophytosis in adults.

• Abuse of topical steroid, steroid and antibacterial combination creams and self treatment by caretakers are the multiple factors responsible for this rise.

• It is imperative to educate the parents against the use of over the counter steroid creams for Tinea infection and ensuring the compliance to the general measures and duration of appropriate antifungal medication.

• Avoidance of tight clothing, sharing of towels and soaps may reduce the incidence of these infections.

References


DEVELOPMENT AND DEVELOPMENTAL ANOMALIES OF TEETH

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Abstract: Development of tooth starts in the fifth week of intrauterine life and characterized by an interaction between oral epithelium and ectomesenchyme. Tooth eruption is a unique phenomenon characterized by eruption sequences and timings. The chronology of tooth eruption shows a variation in different populations. Developmental anomalies of teeth can be classified according to variation in their number, size, shape and hereditary disturbances. Knowledge regarding tooth development, eruption and developmental dental anomalies are very important for Pediatricians who monitor the process of growth and development in children. Early diagnosis of developmental dental anomalies can be significant in preventing the onset of dental problems.

Keywords: Tooth development, Eruption, Sequence of eruption, Developmental anomalies.

Points to Remember

• Development of tooth is a genetically guided unique process that begins in intrauterine period and continues for several years after birth.

• Chronology of tooth eruption follows a sequence which shows variation according to gender, jaws, and quadrant in the type of population studied.

• The eruption process can also get affected by various syndromes, systemic conditions, numerous external factors and genetic conditions.

• The developmental anomalies of teeth can be related to their number, size, shape and hereditary disturbances which show a variation in prevalence and severity.

• Eruption time of teeth has huge variation compared to standard eruption charts. Therefore pediatrician’s knowledge about tooth development, eruption, and developmental disturbances has a considerable significance.

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A RARE CASE OF DROP ATTACKS - L 2 HYDROXY GLUTARIC ACIDURIA

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Abstract: L-2-hydroxyglutaric aciduria is a neurometabolic disorder caused by mutations in the L-2 hydroxyglutarate dehydrogenase gene. The disease has an insidious onset with slow progression and diagnosis is commonly made in late childhood to early adolescence. Initial clinical features are developmental delay, learning difficulties and in later years cerebellar signs become the dominant clinical manifestation. Drop attacks present as sudden and spontaneous falls without loss of consciousness and followed by rapid recovery can occur in epilepsies, movement disorders, cataplexy, psychiatric disorders and rarely in leukodystrophies. We report a case with drop attacks with elevated urinary 2 hydroxyglutaric acid.

Keywords: L-2 hydroxyglutaric aciduria, Drop attacks, Dysgraphia, Symmetrical confluent hyperintensities.

References