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Case Report

Abdominal Migraine in a Eight year old Girl

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Abstract:

Abdominal migraine is a migraine variant, causing chronic idiopathic recurrent abdominal pain in 4-15% of children. It is usually seen between the ages of seven to twelve years and is more common in girls, with prevalence at the age of ten years. International Classification of Headache Disorders-(ICHD-2) defines Abdominal Migraine (AM) as idiopathic disorder characterized by attacks of midline, moderate to severe abdominal pain lasting 1-72 hours with vasomotor symptoms, nausea and vomiting, and included Abdominal migraine among the periodic syndromes of childhood that are precursors for migraine. A 8 years old girl was admitted in Dhaka National Medical College Hospital (DNMCH) with the complains of episodes of severe abdominal pain since five years of her age. The pain was associated with nausea and vomiting which lasted for two to three days. It was dull aching, predominantly around the umbilicus, usually in the evening, intermittent, getting relieved by taking painkillers and antacids or H2 blockers. For this reason she was admitted in different hospitals several times and usually interferes her normal daily activities but with periods of wellness between episodes. Her mother had history of headache since her childhood. On examination, she was pale and mildly dehydrated investigations were done such as CBC with film, Urine R/E, Serum electrolytes, LFT, RFT, Stool R/E, USG of Whole abdomen to exclude any pathology but nothing significant was found. She was treated with H2 blocker, antispasmodic, antiemetic and IV fluids and symptom subsided. Little evidence exists the use of drugs to manage AM. For acute treatment of attacks, there is no data regarding ibuprofen or acetaminophen, the 2 agent for which controlled data exist for migraine without aura in young children. There are likewise no data regarding the use of tryptans for AM. Preventive medications that have demonstrated efficacy in clinical trials include pizotifen, propranolol, and cyproheptadine for prevention of recurrent attacks

Introduction

Children with chronic abdominal pain have a high utilization of resources. As is observed with other chronic pain syndromes, abdominal pain leads to significant disability, including interference with family, school, and social activities. Accurate diagnosis as to the etiology of the pain is integral to providing and to the patient and family, as well as maximizing targeted therapeutic options. Chronic, recurrent abdominal pain occurs in 9-15% of all children and adolescents.

The American Academy of Pediatrics Subcommittee on Chronic Abdominal Pain and North Society of Pediatric Gastroenterology, Hepatology and Nutrition "functional abdominal pain" as the most common cause of chronic, idiopathic. Abdominal pain in childhood, after exclusion of anatomic, infectious, inflammatory, or other metabolic causes, and categorize "functional abdominal pain" as1, or a combination of, 4 clinical entities; dyspepsia, irritable bowel syndrome, abdominal migraine (AM), and/or functional abdominal pain syndrome. First described nearly a century ago, AM occur in 1% to 4% of children and has received considerable attention as one of many potential etiologies of recurrent abdominal pain in children.[2,3] In 2004, the International Headache Society (ICHD-2) included AM among its "periodic syndrome of childhood that are precursors for migraine" (Table-1).[4,5] In 2006, Rome III Gastroenterology established separate, but similar, criteria for AM, Confirming AM as a well-defined cause of recurrent abdominal pain (Table 2).[6]

Table-1. International Classification of Headache Disorders 2004 Criteria4

Diagnostic for abdominal migraine include the following:

A. At least 5 attack fulfilling criteria B to D.
B. Attacks of abdominal pain lasting 1-72 hours.
C. Abdominal pain has all of the Following characteristics:

1. Midline location, periumbilical or poorly localized.
2. Dull or "just sore" quality.
3. Moderate or severe intensity.

D. During abdominal pain, at least 2 of the following:
1. Anorexia.
2. Nausea.
3. Vomiting.
4. Pallor.

E. Not attributed to another disorder. History and physical Examination do not show signs of gastrointestinal or renal disease or such disease has been ruled out by Investigations,

Table-2. Rome III Functional Gastrointestinal Disorders 2006 Criteria

Diagnostic criteria for abdominal migraine include all of the following, with 2 or more episodes in the preceding 12 months:

A. Paroxysmal episode of intense, acute periumbilical pain that lasts 1 hours or more.
B. Intervening periods of usual health lasting weeks to months.
C. The pain interferes with normal activities.
D. The Pain is associated with 2 or more the following:
   a. Anorexia
   b.Nausea.
   c. Vomiting.
   d. Headache.
   e. Photophobia.
   f. Pallor.
E. No evidence of an inflammatory, anatomic, metabolic, or neoplastic process.

International Classification of Headache. Disorders-2nd Version define, AM as an idiopathic disorder characterized by attacks of middline, moderate to severe abdominal pain lasting 1-72 hours with vasomotor symptoms, nausea, and vomiting.

A key feature of AM is the complete resolution of symptoms between attacks. The pain is of moderate to severe intensity. In 2001, Dignan et al introduced a comprehensive guideline which included valuable.

Exclusionary criteria for patients with the following features: mild symptoms not interfering with daily activities, burning pain, non-midline abdominal pain, symptoms consistent with food allergy or other gastrointestinal disease, attacks less than 1 hours, or persistence of symptoms between attacks.[7]

Abdominal migraine is more common in those with a family history of migraine headaches ad emerges between the ages of 3 and 10 Years. While AMs rarely persist into adulthood, evidence suggests an evolution of AM into migraine headaches, ergo a "precursor for migraine" 7 In a 10 Year prospective study of nearly 150 children referred for recurrent abdominal pain, Bentley et al identified 70 children whose symptoms were consistent with AM.[9] A equal number of males and females were affected by this condition, and 90% had a positive family history of migraines in first-degree relative. Consistent with reports, diagnosis was made between the ages of 6 and 10 years.[8-10]

Case Report

A 8 years old girl was admitted in Dhaka National Medical College Hospital with the complains of episodes of severe abdominal pain since five years of her age. The pain was with nausea and vomiting which lasted for two to three days. It was dull aching, around the umbilicus, usually in the evening, intermittent, getting relived by taking painkiller and antacids or H2 blockers. For this reason she was admitted in different hospitals several times and usually interferes her normal daily activities but with periods of wellness between episodes. There was no history of stressful condition prior to this attack or any H/O fasting and skipping meals, changes in sleep patterns, exposure to bright lights or association with food. Her mother had history of recurrent headache since her childhood.

On examination she was pale and mildly dehydrated. She was lying on her bed in foetal position holding her both hands around umbilicus. Her temperature recorded at that time was 98°F, Pulse was 96b/min, R/R-24 br/min, B.P.-90/60mmHg. Her anthropometry were within normal limits.Regarding systemic examination Abdomen was soft with tenderness around the umbilicus and there was no Organomegaly. Other system revealed no abnormality.

Laboratory investigations such as CBC with film, Urine R/E, Serum electrolytes, LFT, RFT, Stool R/E, USG of Whole abdomen revealed nothing significant.

She was treated with H2 blocker, antispasmodic, antiemetic and IV fluids and symptom subsided.

Discussion

Abdominal migraine is a subtype of recurrent abdominal pain that is characterized by discrete episodes of pain with clear-cut symptom-free intervals.[11'12] The condition is more commonly seen in children, with a peak prevalence at age 10 years.[11] The term "abdominal migraine" was

first in 1921 to describe attacks of abdominal pain in the absence of headache.[2] Criteria proposed by Dignan et al. 13include dull, poorly localized abdominal pain lasting at least 1 hour, severe enough to interfere with normal daily activities and with associated symptoms of nausea, vomiting, anorexia, and/or pallor in contrast to other chronic abdominal pain, an explanation for recurrent abdominal pain is seldom found.[11] It is estimated that only 5%-10% of children with recurrent abdominal pain have an underlying organic process that contributes to their pain.[12] Over the years, there has been increasing support for the view that otherwise unexplained recurrent abdominal pain is psychological in origin. It is known that both the gut and the nervous system are derived from the same embryologic tissues and that the enteric nervous system and CNS have direct effects on each other.[12]

One proposed mechanism is that stress first contributes to increased arousal in the CNS, releasing neuropeptides and neurotransmitters, which, in turn, leads to dysregulation of the gastrointestinal system.[12] Although many individuals may experience some type of abdominal distress under stressful situations, those with recurrent abdominal pain may react to the stress or may have maladaptive coping mechanisms.[13]

In this case there was a positive family history and pain was dull, severe around umbilicus associated with vomiting and nausea persisted for 2-3days, severe enough to hamper daily activities and symptom free during repeated episodes and subsided by taking analgesics, antispasmodics and H2 blockers which fulfills both Rome III and ICHD criteria of Abdominal migraine. There was no associaton with any stressful condition, food, anatomical inflammatory, metabolic or neoplastic condition in this case.

Preventive medications that have demonstrated efficacy in clinical trials include pizotifen, propranolo and cyproheptadine for prevention of recurrent attacks. Some authors suggest IV Valproic acid which in turn inhibits GABA release and thereby relieve symptoms.

Conclusion

Among children with chronic, idiopathic, recurrent abdominal pain,Abdominal Migraine about 4-15% Given the Spectrum of treatment modalities now availabe for pediatric migraine, increased wareness of cardinal features of AM by pediatricians and pediatric gastroenterologists may result in improved diagnostic accuracy and early institution of both acute and preventative migraine-specific treatments.

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