



ORIGINAL ARTICLE

A report of Milk curd Syndrome: An infant death by long-term constipation and intestinal obstruction due to the parental neglect

Fares Najjari, Sediqei Babak, Sajjadi Sara

Forensic Medical Specialist and Faculty Member Of Shahid Beheshti University Of Medical Science, Tehran-Iran.

Forensic Medical Specialist and Forensic Expert at Legal Medicine Organization of Country, Iran
Assistant of Forensic Medicine, Department Of Forensic Medicine Member Of Shahid Beheshti University Of Medical Science, Iran

ABSTRACT

Constipation in children is a symptom of disease can lead to complicated problems and loss of the quality of life or may result in death when it is not treated and neglected by parents. A 15- preterm infant is taken to the hospital due to the vomiting, inability to pass gas or stool, abdominal pain, and anorexia and has died in hospital after CPR. Autopsy diagnosed that small and large intestine is severely distended and fecal impaction 160g without Bezoars stuck to bowel/abdominal wall. At the end, fecal impaction results in death the functional and electrolyte disorders. Studies showed that constipation for a long time indicates a lack of care or delay in treatment by the parents leads to toxic mega-colon and if it is not diagnosed and improved, would be fatal during 24 hours. Therefore, treatment involves education of the parents about constipation by physicians to prevent such diseases.

Key terms: constipation, fecal impaction, intestinal obstruction mortality.

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INTRODUCTION

The risk of constipation in children under one year old is 2.9 per cent which can increased up to 10 percent in second decade of infant's life. While the prevalence of constipation in public is 1 per cent, that is not a common symptom. More than 95% of children's bowel movements (stool) vary from three times per day to three times per week. However, it is defined Less than three bowel movements a week. Most of the children are transferred to emergency department with functional constipation so it is of particular importance to be diagnosed timely to prevent serious side effects.

Table 1: The rate of the bowel movements at week in different ages

Breast-fed infant		5 – 4 o / per / week
formula	0 – 3 month	5-2 o/ per / week
	6 – 12 month	5 – 28 / per / week
	1 – 3 y/0	4 – 21/ per / week
	> 3 y/0	3 – 14 / per / week

Studying in India during 2001- 2006 on 137 patients (90 male & 47 female) showed that 85% contained functional constipation and 15 % were with organic constipation that 6 % of them contained hirschsprung's disease. In a study by Watanabe et al, a period of Milk curd syndrome was reported. This syndrome for the first time was reported in 1960, but as it was very scarce consequently was forgotten. In

this syndrome that was started for negligent nutrition to the child with superfast and high calorie milk (Fortified Ex pressed Milk) with abdomen distension after 14 days of consuming fatty and high calorie milk. In this disease, abdominal radiography reveals multiple masses within the intestinal lumen along with sonography of hyperechoic bowel. In a study in Bersybo years of 2001-2007 in a retrospective study on nine patient infants with similar symptoms of milk curd syndrome with an average age of 27 weeks who were fed and fortified by formula milk revealed that 8 from 27 underwent laparotomy surgery, one of them Ileostomy and two of them died for intensity of complications. In a study by Baron on an eight-year-old child in Australia, it was reported a case of sudden cardiac arrest and respiratory on which autopsy was done. In a study by Ethan and et al., in 2007 on 59 children of Arab with chronic constipation, 53 of them contained seed Bezoar for consuming too much watermelon seeds; and five of them contained non-seed fecaloma. Many cases have been reported in children intestinal diverticulum or cystic fibrosis and autism.

In a study at Ahvaz Imam Khomeini hospital years of 2001-2006, 192 (male) children from 515 which had the problem of chronic constipation, contained ileus etiology (26 %), band adhesion (17.7 %), partial intestinal obstruction (15.1%) hirschsprung's disease (12%) which 51% improved and rate of the mortality among them was 12.2%. Therefore complications of chronic constipation in children leads to side effects and results in sudden unexpected death due to the sensitivity to electrolyte imbalance and dehydration when they are not treated in time by their parents.

Case report: A 15- preterm breast-fed infant with 10 kg weight, baby head circumference 48cm, chest circumference 48 cm, and waist circumference 45 cm was born. The intended infant was the first child of a young family who was born at 35 weeks through cesarean by poor feeding and soft belly and lack of bowel movement, brief dehydration and weight losing at least two weeks before who was transferred to gastroenterology clinic of a medical center in Tehran. Cardiac and pulmonary CPR was conducted immediately but the patient was expired after 45 minute. In order to find the exact cause of death the patient was referred to Tehran Forensic Medicine Organization's dissection room, patient with mild PDA and having cold was in treatment and fortified by milk but apparently true mother was unknown with child 's high-calorie, high-fat milk. Physical examination of corpse showed that there was not the effect of battering, bruising, fracture and abnormal point. The autopsy under the skin and inside the brain and the membranes, pharynx and larynx represented not any problem; there was no foreign object into the mouth and airways. On both sides of the pleural cavity was 100 cc of amber liquid and left lung represented with minimal adhesion to the chest wall and edematous of right lung that was soft tissue consistency like liver. There was no abnormal point in studying of heart that weighs 85gr and blood vessels attached to it, valves and heart walls were normal. Opening the abdominal cavity showed that there are 400 amber liquid in the intestines layers, however purulent discharge and peritonitis effects non-existed and in the study intestine had no rupture and nacreous or nigrescence, a hard focal having 160g weight that is sticking to the last end of sigmoid in large intestine, urinary-genital system in the studies lack unnatural points. The experiment of milk curs was reported as negative and in the microscopic experiment and in pathology pulmonary of freezer along with severe purulent bronchopneumonia was reported in the primary stages, but heart and vascular and intestine walls especially sigmoid and rectum lacked unnatural point and nervous ganglions existed in intestine walls. The reason of the patient death was intestinal obstruction after fecal impaction was declared and specified.

RESULT AND DISCUSSION

Practitioner facing a child with constipation has different types of detection range but most of these congenital diseases are distinguished at the lower ages and were treated. Diseases that were the cause of constipation, the abnormal spine and muscles, encephalopathy, cerebral palsy, anal stenosis and anal no holes, Hirschsprung's disease, celiac disease, cystic fibrosis, allergic to cow's milk and prone belly syndrome, hypothyroidism, type dysplasia and mitochondrial abnormalities were noted. One of the most common recognitions in this regard was functional constipation that while lack of specific diseases and specially gastrointestinal of the child will be afflicted to the symptoms of constipation that in girls is more common than boys and in the families with low economic and social levels is more common. Studies showed that chronic constipation can be the sign of parents' attention to and their simplicity in raring children that is one of the rare cases of milk curd syndrome that because of nutrition with milk formula will be created in preterm infants. This syndrome that its first item was reported in 1960, in Iran it was not reported still. In the case study, true parents of the child for lack of familiarity with taking care of the child and insufficient education by related medicine from the birth of child with milk formula fed and in the experiment the content of milk formula and lactose in a very massive amount in the great intestine was seen so that negligence of true parents in reaching the child to treatment centers faced them

unexpected event of death of their children, in the previous studies it was analyzed by autopsy. According to the idea of Night more special changes including empty intestine and airful intestine from gum to colon along with limitations of consuming liquid and observation of hard stool in the end of great intestine can poses consideration with preserving children, therefore emphasizing on child growth in offering simple education by medicine can have an influential help to prevent prevention such as hard issues.

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