ISSN: 0975-8585

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Endoscopic Insufflation Temporarily Ameliorates Symptoms in an Infant with Achalasia cardia.

Vijayasekharan Kalasekhar, Chandrasekaran Venkatesh*, Barath Jagadisan, and Reena Gulati.

Department of Pediatrics, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry, India.

ABSTRACT

Achalasia cardia is a neuromuscular disorder of esophagus associated with abnormal motility and failure of relaxation of lower esophageal spinchter. It is a rare condition in young infants.We report a four month old infant who presented with recurrent bouts of vomiting uncurdled milk, failure to thrive and an eagerness to feed. Endoscopic isufflations resulted in symptomatic improvement and satisfactory weight gain before the infant could be posted for elective surgery.

Keywords: achalasia cardia; infant; endoscopic insufflation

Corresponding author

ISSN: 0975-8585

INTRODUCTION

Achalasia cardia is a neuromuscular disorder of esophagus associated with abnormal motility and failure of relaxation of lower esophageal spinchter [1]. It is uncommon but well recognized entity in infancy [2,3]. Treatment options include pneumatic dilatation and Laproscopic Hellers myotomy [4]. we report a relatively simple technique that resulted in sustained improvement of symptoms in a four month old infant who presented with recurrent bouts of vomiting uncurdled milk and failure to thrive.

Case Report

A four month old male infant was brought to our hospital by his mother for complaints of poor weight gain since birth associated with frequent vomiting of uncurdled milk followed by an increased eagerness to feed since day five of life. He was second born to a 24 year old mother through non-consangineous marriage. Antenatal and natal periods were normal and he was delivered as a term baby with birth weight of 2.75 kg. In addition to the above symptoms, history of intermittent noisy breathing was also reported by his mother.

At admission the infant`s weight and length were 3kg and 51cm respectively. On examination he was alert marasmic but interacting well with his mother. His vitals, general examination and systemic examination were unremarkable. Plain radiograph of chest and abdomen revealed normal bilateral lung fields with distended thoracic esophagus. His renal function test and serum electrolytes were normal. An esophageal motility disorder was suspected and a fluoroscopy guided water soluble contrast study revealed an aperistaltic distal one third of esophagus with bird beaking of lower end suggestive of an achalasia (figure 1).

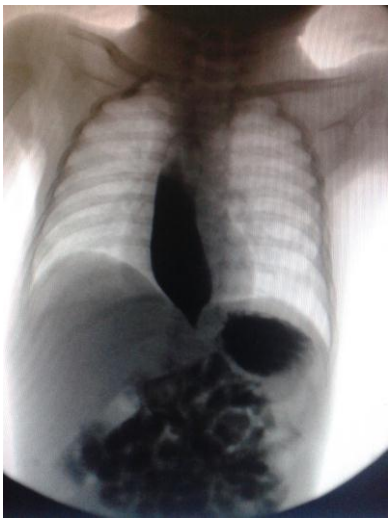

Figure 1 showing bird beaking of lower end of esophagus on fluoroscopy

Upper GI endoscopy revealed dilated esophagus with non-propagative contractions with increased resistance across the Lower esophageal sphinchter (LES). The LES did not show erosions or ulcerations. Stomach, first and second part of the duodenum appeared normal. His echocardiogram and ultrasound abdomen to rule out associated major anomalies were normal. A diagnostic nasal endoscopy done to rule out associated upper airway anomaly revealed an omega shaped epiglottis suggestive of laryngomalacia. After the upper G.I.endoscopy, there was an apparent improvement in the symptoms in the form of subsidence of vomiting, improved feed tolerance and steady weight gain over a four month period and subsequently the infant underwent an Heller`s myotomy at eight months of age following which he remains asymptomatic.

DISCUSSION

A global survey of esophageal achalasia in childhood revealed that 18% of children had their symptom onset during infancy but only 6% of these patients were identified as having achalasia during that period [5]. Marlais et al reported a mean incidence of 18 per 100,000 people per year in children younger than 16 years [6]. Among the Asian populations, higher incidence is found among Chinese and Indians [7]. The common presenting features among infants include regurgitation of feeds, vomiting, failure to thrive, and

recurrent lower respiratory tract infections. Vomiting 'uncurdled milk' while feeding is a diagnostic clue in infants with achalasia, but it can also be associated with severe GERD in infants [8]. Achalasia cardia can be associated with alacrimia and adrenal insufficiency as a part of Allgrove syndrome [9]. In our case, there was no evidence of alacrimia or features of adrenal insufficiency.

Treatment strategies are poorly defined for infants with achalasia. As there is no cure for achalasia and since there is a need for recurrent procedures to relieve obstruction, the ideal choice of treatment especially in young infants should be one which is able to provide prolonged symptom free intervals, promote feeding and improve weight gain. Gentle pneumatic insufflations followed by endoscopic manipulation of LES can lead to the improvement in symptoms, especially in type II achalasia, as observed in our case. As opposed to pneumatic dilatation, insufflations can result in less chance of esophageal perforation. The reported infant was kept under follow up for four months during which time there were no episodes of vomiting or regurgitation and the child gained 3.5 kilograms and was subsequently operated upon uneventfully at eight months of age. A high index of suspicion for achalasia in any infant with recurrent episodes of vomiting 'uncurdled milk' is warranted to prevent long term complications related to delayed treatment. Endoscopic insufflation is a promising technique in preventing symptoms and improving nutrition until definitive surgery is planned. Further Randomized trials are needed to compare endoscopic insufflations as opposed to pneumatic dilatation and Heller`s myotomy in the treatment of infantile achalaisa cardia.

REFERENCES

[1] Boeckxstaens GE, Zaninotto G, Richter JE. Lancet 2014;383:83–93.
[2] Azizkhan RG, Tapper D, Eraklis A. J Pediatr Surg 1980;15:452–6.
[3] Upadhyaya VD, Gangopadhyaya AN, Gupta DK, Sharma SP, Kumar V, Gopal SC. World J Pediatr 2008;4:63-5.
[4] Moonen AJ, Boeckxstaens GE. Gastroenterol Clin North Am 2013;42:45-55.
[5] Myers NA, Jolley SG, Taylor R. J Pediatr Surg 1994;29:1375–9.
[6] Marlais M, Fishman JR, Fell JME, Haddad MJ, Rawat DJ. Arch Dis Child 2011;96:192–4.
[7] Sonnenberg A, Massey BT, McCarty DJ, Jacobsen SJ. E Dig Dis Sci 1993;38:233–44.
[8] Thomas RJ, Sen S, Zachariah N, Chacko J, Mammen KE. J R Coll Surg Edinb 1998;43:103–4.
[9] Allgrove J, Clayden GS, Grant DB, Macaulay JC. Lancet 1978;1:1284–6.