

Case Report

Ig E Mediated Cows Milk Protein Allergy (CMPA) Case Report

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Abstract: Cow's milk protein allergy is defined as an abnormal reaction by the body's immune system to whey proteins and casein found in cow's milk. It can result in gastrointestinal, respiratory as well as skin problem. Here we report a case in a 6 month infant of GI symptoms of watery loose stools, associated with blood and mucus with vomiting and decreased urine output due to cow milk. Cow's milk protein allergy is mostly confused with infection. Early diagnosis and treatment initiation is a key to positive outcome. Breast feeding is the gold standard for milk feeding in infant nutrition and is recommended exclusively for the first 6 months of age.**Keywords:** cow milk protein allergy(CMPA), whey proteins, casein, IgE.

INTRODUCTION

Though the incidence of cow's milk protein allergy is very small percentage of 2.2% most of the time it is undiagnosed at the early infancy period and present at a later age malabsorption [1-2]. The current case report is to discuss on CMPA in a 6 month old infant and early diagnosis and treatment implemented. Early diagnosis and adequate treatment decrease the risk of impaired growth.

CASE REPORT

A 6 month old infant presented with GI symptoms to OPD which started on cow's milk was investigated and found to have elevated serum IgE levels and eosinophil count.

A 6 month old developmentally normal male infant born to a non- consanguineous married couple was brought by parents with history of 8 episodes of watery loose stools, associated with blood and mucus of one day duration, associated with vomiting and decreased urine output. H/O recent introduction cow's milk was present. Child was evaluated and found to have moderate dehydration which was corrected with bolus fluid and continued on maintenance IVF. Investigated for the same (Hb-12.8, pcv-51.2, plt-2.01, tc-20,000, DC- shows eosinophilia, CRP< 5, IgE- 80IU/ml. Cow's milk protein allergy was considered advised to discontinue cow's milk for the infant and avoidance of dairy products in mother till infant is breast fed and weaned of IVF once oral is tolerated and discharged after symptomatically well. Infant was started on soy protein formula in view of poor milk secretion in mother. Patient was followed up after 1, 3 and 6 months

and then cow's milk was gradually introduced in the infants diet as tolerated. child had resolution at 1 year of age.

DISCUSSION

Cows milk protein allergy is one the most milk protein allergy seen in infants. It accounts for about 2.2% in infants. Although the incidence is very minimal most of the times left undiagnosed and confused with infection. CMPA can be either IgE mediated or non-IgE mediated. CMPA can persist upto 2 to 5 years of age [3]. CMPA persists in only a minority of children. The prognosis depends on the patient's age and titre of specific IgE at the time of diagnosis. And its important to note that patients with a history of IgE-positive CMPA are at increased risk of developing atopic diseases, such as asthma, atopic dermatitis and conjunctivitis, than those who were IgE-negative CMPA. Further more IgE positive CMPA are at risk of developing multiple food allergies. Diets must be nutritionally balanced. In children with persisting CMPA, a supplementation with calcium must in order to avoid its deficiency.

Milk protein allergy is a recognized problem in the first year of life cow's milk protein allergy is the most common such allergy [6]. It should be noted that milk protein allergy can also occur in exclusively breast fed infants its because of the food proteins from milk, egg, peanut and wheat are excreted in breast milk and may cause adverse reactions even in exclusive breast fed infants [4]. Due to the many benefits of breast feeding to the infant and the mother, clinicians should advise mothers to continue breast feeding but avoid

these foods in their own diet. Diagnosis is suspected on history and with laboratory evaluations playing a supporting role [5]. Management includes dietary modification for nursing mothers and soy protein formulas for mothers who have poor secretion. Assessing the underlying immunopathology can aid in determining prognosis. An acute attack of gastroenteritis, in damaging the small mucosa, may act as a triggering mechanism in cows' milk protein intolerance, and a deficiency in IgA may be a predisposing factor in so far as it allows the patient to become sensitised to foreign protein [8]. Allergic reaction can be to the whey proteins (beta lactoglobulin, alpha lactalbumin, bovine serum albumin and immunoglobulins) and casein (alpha s1, alpha s2, beta, kappa) [7].

CONCLUSION

Cow's milk protein allergy is mostly confused with infection. Early diagnosis and treatment initiation is a key to positive outcome. Breast feeding is the gold standard for milk feeding in infant nutrition and is recommended exclusively for the first 6 months of age.

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