

## Case Report on Cow Milk Protein Allergy

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### ABSTRACT

Cow's milk protein allergy is kind of allergy to milk in the newborn's and children's immunity reacts to whey proteins and casein present in milk of the cow. 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 commonly mistaken for with infection and intolerance to lactose, but they are dissimilar. Early diagnosis and treatment plays a vital role to positive outcome. The ideal treatment for these infants is exclusive Breast feeding till 6 months of age.

**Key words:** Cow milk protein allergy (CMPA), Whey proteins, Casein, IgE

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### INTRODUCTION

CMPA commonly seen in infants and is the most prevalent allergy to food in infancy. Most of the time it is undiagnosed at the early infancy period and present at a later age as malabsorption [1,2]. The case report is on CMPA in a 6 month old infant and on early diagnosis and treatment implementation. Detecting the condition early and suitable treatment reduce the threat of growth impairment and development.

### CASE REPORT

A 6 month old infant presented to pediatrics OPD with GI symptoms which started on introducing cow's milk was investigated and found to have elevated serum IgE levels and eosinophil count. A 6 month old developmentally normal female infant born to a non-consanguineous married couple was brought by parents with history of 7 episodes of loose stools watery in consistency, with blood and mucus of two 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 RL fluid and continued on maintenance IVF. Investigation revealed Hb-12.6, pcv-51.3, plt-2.02, tc-2 1,000, DC-shows eosinophilia, CRP<5, IgE- 50IU/ml. Cow's milk protein allergy was considered and mother

was advised to discontinue cow's milk for the infant and avoidance of dairy products in mother till infant is breast fed. Infant was weaned of IVF once oral was tolerated and discharged after symptomatic improvement. Patient was followed up after 1, 3 and 6 months and then milk of cow was cautiously introduced in the diet of the infant as tolerated. At the follow-up examination at the end of 2 years of age, the child was thriving on normal diet, and with normal development.

### DISCUSSION

Cow milk protein allergy is one of the milk protein allergies commonly seen in infancy. It accounts for about 2.2% in infants. CMPA is either mediated by IgE or not mediated by IgE and can persist up to 2 to 5 years of age. [3]. CMPA continue to exist in only some of the children. At the time of diagnosis, titer of specific IgE and patient age predicts the prognosis. And its important to note that patients with IgE-positive CMPA history have more chances of getting atopic diseases, like atopic dermatitis, asthma, allergy to food and conjunctivitis. Diets must be nutritionally balanced. In children with persisting CMPA, a supplementation with calcium is must in order to avoid its deficiency. Allergy to milk protein is a well-known problem in till one year of age and cow's milk protein allergy occur most frequently [4].

It should be noted that allergy to milk proteins is also seen in exclusively breast fed infants [5]. It's because of the proteins from egg, peanut, milk and wheat are excreted in breast milk and can cause allergic reactions even in infants who are breastfed exclusively. Owing to the advantages of breast feeding to the infant and mother, clinicians suggests mothers to breast feed but

promotes mothers to eliminate these foods in their own diet. Diagnosis is usually made on history along with laboratory investigations contributing for diagnosis [6]. Treatment includes modifying diet for nursing mothers and soy protein formulas for mothers who have poor secretion. Evaluating the underlying immunopathology can help in assessing the prognosis of the infant. An acute attack of gastroenteritis, in damaging the small mucosa, can be a triggering factor in protein intolerance to cow's milk, and IgA deficiency can make the patient more prone to CMP as it allows the patient to become sensitized to foreign protein. Allergic reaction can be to the whey proteins (alpha lactalbumin, beta lactoglobulin bovine serum albumin and immunoglobulin's) and casein (alpha S1, alpha s2, beta, kappa) [7].

### CONCLUSION

Cow's milk protein allergy is a well-known and most common problem in the first year of life and is commonly mistaken for with infection and intolerance to lactose, but they are dissimilar. Early diagnosis and treatment plays a vital role to positive outcome. The ideal treatment for these infants is exclusive Breast feeding till 6 months of age.

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