

Appendico-Umbilical Fistula Simulating Persistent Vitello-Intestinal Duct Fistula : A Case Report

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Abstract: Neonatal appendicitis is quite rare, rarer still when it presents as appendico-umbilical fistula. Faeculent umbilical discharge is commonly due to persistent vitello-intestinal duct fistula, we however, presents a four week old neonate who presented appendico-umbilical fistula.

Keywords: Appendico-umbilical fistula, Vitello-intestinal duct fistula, malformations.

INTRODUCTION

Neonatal appendicitis is quite rare, rarer still when it presents as appendico-umbilical fistula. Faeculent umbilical discharge is commonly due to persistent vitello-intestinal duct fistula, we however, present a four week old neonate who presented appendico-umbilical fistula and had appendectomy.

CASE PRESENTATION

We report this four week old neonate who presented with discharge of faecal matters from the umbilicus about one week after delivery, which was shortly after the umbilical stump fell down, there were no history of fever, constipation, vomiting, and prior history of purulent discharge from the umbilicus. The pregnancy and delivery were uneventful. Examination showed a stable neonate with faecal discharge through protruding mucosa from the umbilicus (fig 1), however, other systems were

essentially normal. A diagnosis of persistent vitello-intestinal duct anomaly was made. She was prepared with the packed cell volume of 46% and had surgery.

Moreover, at the operation under general anaesthesia through a gentle curve supra-umbilical incision the abdomen was assessed and appendico-umbilical fistula at the tip of the vermiform appendix was found (figs 2 and 3). It was dissected from the umbilicus and conventional appendectomy was done under general anaesthesia (fig 4), the repair of the umbilical defect was carried out in turn. She had a smooth recovery.

The Histopathologic findings showed an acute-on-chronic appendicitis with lymphoid follicular hyperplasia of the lymph node. The four weeks of follow-up revealed that the surgical wound healed well and the patient was stable.



Fig-1



Fig-2



Fig-3

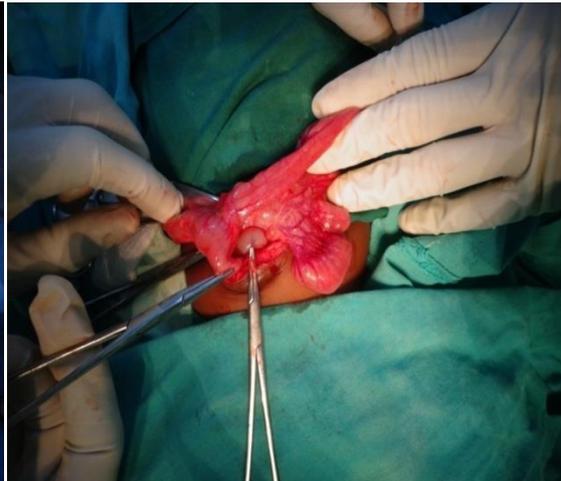


Fig-4

DISCUSSION

Vitello-intestinal duct fistula is the commonest vitello-intestinal malformation that presents with faecal discharge from the umbilicus in infants, [1] however; there are other causes of umbilical discharge which includes the urachal fistula and omphalitis [2] We present a rare cause of faeculent discharge from the umbilical the appendico-umbilical discharge.

Appendico-umbilical fistula is an extremely rare pathology as only few were reported in the earlier literature [3] The cause remained unknown however it is said that in the embryonic stage, by the 5th week gestation on the mid-gut is attached to the York sack through the vitello-intestinal duct and by 6th week of gestation with rapid development and elongation of the mid-gut which herniated through the umbilical ring covered by the sac. By the 10th week of the vitello-intestinal detaches from the umbilical by obliteration. However, if it persists it can give rise to various malformations ranging from a fistula to a diverticulum. Similarly the vermiform appendix that goes with the herniated bowel may also remain attached to the umbilical ring even after the bowel return to the peritoneal cavity [4] Another theory suggests that the appendix may be clamped in an unrecognized exomphalos minor [5,6].

The diagnosis can be made clinically however it may simulate Vitello-intestinal duct fistula but the latter can be differentiated from the former by doing fistulogram which can outline the fistula to ileum while in appendico-umbilical the fistulogram may outline it to a globular structure which is likely to be the caecum [7]. The definitive treatment is appendectomy through a curvilinear supra-umbilical incision as shown in the fig-3 & Fig- 4. The prognosis is excellent as reported in literature [7] and in the index case.

CONCLUSION

Although rare appendico-umbilical fistula can present in an infant and therefore simulate persistent v

itello-intestinal duct fistula hence an infant presenting with faecal discharge from the umbilicus should be considered as differential diagnosis and the management is a ppendectomy with excellent outcomes.

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