Infantile bloody nipple discharge: A case report and review of the literature

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ABSTRACT

Bloody nipple discharge is described as an extremely rare clinical entity in a 7-month-old infant managed conservatively. The authors discuss the management protocol of this rare clinical presentation along with the pertinent literature.

Key words: Blood, breast diseases, infants, nipple discharge

INTRODUCTION

Infantile bloody nipple discharge is an extremely uncommon clinical entity of great concern, especially for parents because of its association with the more devastating breast diseases in adults.[1] But surprisingly, among a handful of such reported cases in the paediatric age group, bloody nipple discharge has been found to be idiopathic in nature, especially in infancy.[1-10] Thus, knowledge regarding the management protocol of this rare entity is warranted to avoid any unnecessary invasive intervention. Thus, we herein report the present case to highlight the clinical approach in such cases so that psychological and physical trauma resulting from unnecessary invasive interventions can be avoided.

CASE REPORT

A 7-month-old full-term male infant presented with a 15 day history of intermittent bloody nipple discharge from the left breast. The discharge was serous for the first 2 days and gradually became pink and then red. History of trauma and swelling in the breast was absent. The baby was breast fed for the initial 5 months and there was absence of any maternal intake of drugs. The examination revealed the presence of a reddish discharge from the left nipple in the absence of any local or systemic abnormality.

Laboratory investigations revealed a normal serum prolactin, thyrotropin, progesterone and estrogen levels. Microbiological examination, including gram staining, microscopic examination and culture of discharge showed no evidence of infection. There was no evidence of duct ectasia or any nodule on ultrasound examination.

The baby was managed conservatively in the form of reassurance and counselling. The discharge gradually disappeared over a period of 3 months.

DISCUSSION

Bloody nipple discharge is an extremely uncommon clinical entity in infancy, with only four reported cases in the English literature.[1-8] Although bloody nipple discharge remains an important clinical presentation of breast pathologies, especially malignancy in adults, it is rarely associated with any significant breast pathology in the paediatric age group.[1-6]

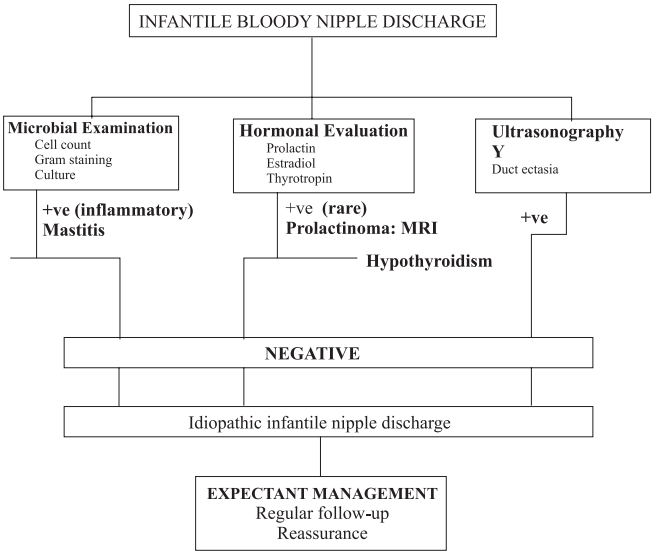
The aetiopathogenesis of infantile bloody nipple discharge remains unclear in most of the reported cases and hence it appears to be idiopathic in nature, especially in infancy.[1,4] However, few cases have been reported in the presence of benign breast diseases like mammary duct ectasia, abnormal response of the breast tissue to maternal hormones or high levels of progesterone and, rarely, in the presence of prolactinoma or inflammatory breast pathologies like mastitis, where the clinical presentation provides a preliminary clue to the diagnosis.[4,10]

The typical clinical presentation is characterized by the presence of intermittent clear or serous discharge, which gradually becomes pink or bloody in the absence of any inflammatory features.[1-11] Also, an absence of bilateral milky discharge, headache and amenorrhea

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Table 1: Management of infantile bloody nipple discharge



excludes the possibility of prolactinoma, which has been reported in few cases between 7 and 17 years of age.[1,12]

Although a diagnostic approach of nipple discharge has been formulated in adults, the management of nipple discharge and the treatment protocol have scarcely been discussed, especially in infants.[1-5] As experienced in the present case, counselling and psychological support aimed at relieving the anxiety and apprehension of parents remains the initial step in managing such cases. The initial workup includes thorough clinical examination to assess the nature of the discharge, signs of inflammation and presence of any lump in the breast [Table 1].[1,2] Laboratory evaluation includes microbial examination of the discharge in the form of gram staining, microscopic examination and culture followed by hormonal analysis in the form of serum prolactin, progesterone, estrogen and thyrotropin levels.[1-6] The presence of infection on microbial analysis mandates treatment of mastitis and similarly the infant should be managed in consultation with an endocrinologist if the hormone levels are abnormal.[1-4] As experienced in the present and in the few reported cases, we feel that ultrasound examination of the breast still remains a useful diagnostic tool, especially to rule out mammary duct ectasia, which although managed conservatively, may sometimes need paediatric surgical intervention.[1-3,7-11]

The treatment of infantile bloody nipple discharge is mainly conservative.[1,8] Reassurance and parental counselling remain the mainstay of treatment, resulting in spontaneous resolution after 3–6 months of expectant management.[1,8] Moreover, a lack of its association with major breast pathologies in infants and an absence of development of any new clinical abnormality on long-term follow-up in the present and in the few reported cases precludes the need for any unique long-term follow-up.[1,11]

Thus, we conclude that the aetiology of bloody nipple discharge is altogether different in adults and in infants. Hence, in view of the low likelihood of any serious associated breast pathology in the paediatric age group, an awareness regarding its clinical presentation and management protocol is warranted, especially to avoid unnecessary invasive diagnostic and surgical interventions and the resulting psychological trauma.

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