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Pediatrics

Acute Scrotal Swelling in Henoch-Schonlein Purpura: Case Report and Review of the Literature

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ABSTRACT

Henoch-Schönlein purpura (HSP) is a systemic vasculitis characterized classically by purpura, arthritis and abdominal pain. Epididymitis/orchitis is rarely seen as a complication of HSP. Testicular or scrotal involvement has been reported in children with Henoch-Schonlein purpura and must be distinguished from testicular torsion. We report a case of a 5 year old boy diagnosed with Henoch-Schönlein purpura with acute scrotal swelling. He was managed successfully with conservative approach. The history, clinical examination findings and scrotal ultrasound evaluation should suffice to make the correct diagnosis and avoid surgery. Steroid treatment and/or antibiotics appeared to be effective for this condition.

Introduction

Henoch-Schonlein purpura is a most common systemic vasculitis in children characterized by deposition of immune complexes containing the antibody IgA; the exact cause for this phenomenon is unknown.[1] Purpura, arthritis and abdominal pain are known as the "classic triad" of Henoch–Schönlein purpura. Uncommon manifestation of HSP includes scrotal disease, pulmonary disease, carditis, and CNS involvement. Epididymitis is rarely seen as a complication of HSP. It is easily misdiagnosed as testicular torsion, causing the patient to undergo unnecessary surgery. We report an interesting case of 5 year old boy who initially presented with acute scrotal (testicular) swelling and on subsequent history and clinical examination diagnosed as Henoch-Schonlein purpura. The objective of this article is to discuss about HSP orchitis and its clinical presentation and diagnosis with review of the literature.

Case report

A 5 year old boy presented to his general practitioner in the rural town with 6 hours history of acute scrotal/testicular swelling. The boy had cough 7 days prior with intermittent fever. He then developed rash over both feet then gradually spread up till the knees, thighs and to the buttocks. This was followed by knee swelling and pain. Few hours later, child's mother noted some redness and swelling over the scrotum, hence presented to GP. He was transferred to our hospital for further evaluation and management. There was no history of nausea, vomiting, abdominal pain, hematuria, scrotal trauma or urinary tract infections. On arrival, the child was not in any distress and his vital signs were in the normal range. On physical exam, there were petechial/purpuric rash diffusely spread over both feet extending up to knees, lower abdomen and buttocks (Figs. 1 and 2). His abdomen examination was soft and non-tender while on chest auscultation, it revealed scattered crepitation. Genital exam showed erythematous and edematous scrotal wall (Fig. 3), left testicle was enlarged, eliciting mild tenderness, was in normal position and lie. Right testis felt normal size and non tender. Later on, the boy complained of mild abdominal pain. Blood test revealed normal WBC and CRP was 26 mg/L. Platelet count slightly rose to 452×10^9/L. Urinalysis showed no microscopic heamaturia or proteinuria. The USS scrotum revealed increased vascularity of the left testicle with diffuse scrotal wall edema and blood flow to both testes with some fluid collection under the left testicle.

The diagnosis of HSP was made clinically by the author given the classical appearance of rash and history. The diagnosis was supported by the pediatrician as well. The patient was prescribed intravenous antibiotics and oral steroid as per the guidelines for orchitis. He was admitted to the pediatric ward for observation. The patient recovered well without any surgical intervention and was discharged home next day.

Disclosure: None declared.

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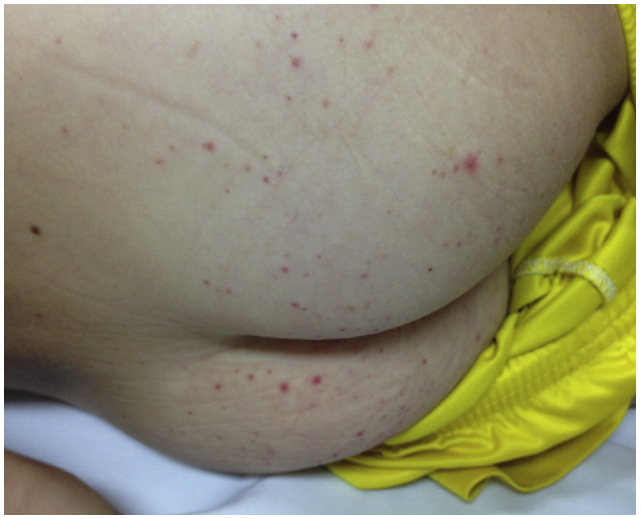

Figure 1. HSP rash over the buttocks.

Discussion

Henoch-Schonlein purpura (HSP) is the most common cause of non-thrombocytopenic purpura in children[1] between 4 and 11 years of age and its incidence reported is approximately 14 in 100,000 populations.[2] HSP involves the skin and connective tissues, scrotum, joints, gastrointestinal tract and kidneys.[3] HSP is often preceded by an infection, such as a throat infection. The hallmark of the disease is the characteristic non-thrombocytopenic purpura which appears in nearly all patients (though in as many as 50% of children, it may not be the presenting feature) over the extremities and buttocks. After the prodrome, a number of symptoms develop such as rash (95–100% of cases), especially involving the legs, abdominal pain and vomiting (35–85%), joint pain (60–84%), especially involving the knees and ankles, subcutaneous edema (20–50%), scrotal edema (2–35%), and bloody stools.

In 1837, Schonlein first described the characteristic purpura and arthralgia, which are together pathognomonic of HSP. In 1874, Henoch recognized the frequent association with gastrointestinal and genitourinary symptoms on this condition.[2,4] Acute scrotal involvement may include scrotal rash, edema of scrotal wall soft tissue, testis and epididymis, and either bilateral or unilateral pain. Allen et al, were first to describe scrotal involvement in HSP in 1960 review that focused on renal complications of the disease.[5]

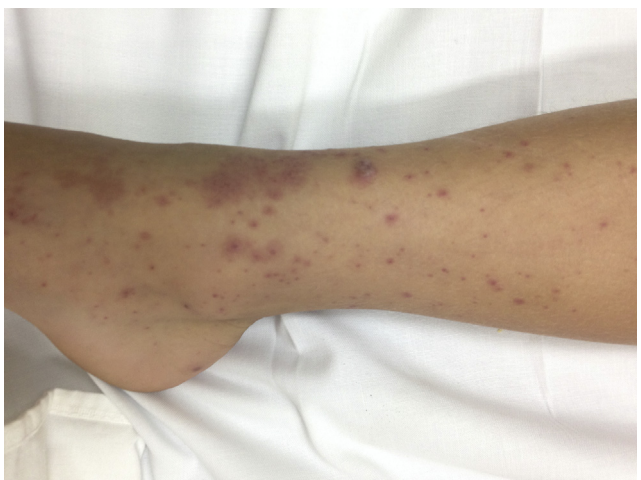

Figure 2. HSP rash over legs.

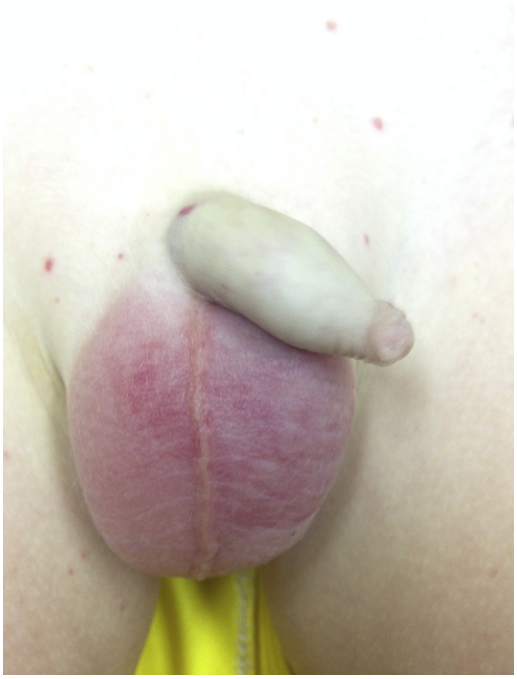

Figure 3. Erythema of the scrotal wall.

HSP is recognized as an unusual cause of acute scrotal swelling in children. Various studies have reported different incidence of scrotal involvement of HSP cases. The reported incidence of scrotal involvement of HSP cases ranges from 2 to 38% and HSP with scrotal manifestation occupies approximately 3% of all cases of acute scrotal presentations.[1] Weber TR et al reported incidence up to 24% in boys with HSP, with up to 60% of these being unilateral. NSY Chao et al reported 10% of acute scrotum at presentation.[4] Ha and Lee reported 26 out of 120 boys (21.7%) diagnosed with HSP had scrotal involvement.[3] Scrotal involvement in HSP may mimic testicular torsion, which must be excluded. True torsion is rare. Soreide et al, indicated that 80 of 603 cases (13%) presenting with a diagnosis of HSP had scrotal symptoms, and 16% of these patients underwent surgical exploration due to scrotal symptoms. Real torsion was not identified in any of these patients. Hara et al performed surgical exploration in 11 of their 25 HSP cases and did not identify testicular torsion in any of these patients.[1] Ha and Lee reported that neurologic symptoms, localized edema, and high serum C3 levels were significantly related to scrotal involvement in male patients with HSP.[3]

The scrotal involvement in HSP is not so uncommon. The accurate diagnosis of HSP is mandatory by the early identification of purpura and symptomatology of HSP along with imaging evaluations in order to avoid unnecessary procedures. In view of the literature, the typical case of scrotal involvement in HSP should be managed conservatively, with a short-term administration of steroid therapy and/or antibiotics, not surgically.[1,3]

Conflict of interest

There is no conflict of interest.

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