

## ACUTE SCROTAL SWELLING IN HENOCH-SCHÖNLEIN PURPURA: A CASE REPORT

Naoki SAKAI, Kanji KAWAMOTO and Hiroshi FUKUOKA

*From the Department of Urology, Yokohama Minami Kyosai Hospital*

Syoko NAKAJIMA and Hiroko KUROZUMI

*From the Department of Pediatrics, Yokohama Minami Kyosai Hospital*

Henoch-Schönlein purpura is a systemic vasculitis and sometimes presents as acute scrotal swelling in children. We report a case of Henoch-Schönlein purpura with acute scrotal swelling, which was correctly diagnosed based upon local physical findings. Scrotal ultrasonography showed normal testes and hydrocele testis around the affected testis 3 hours after the sudden onset of the pain. The scrotal symptoms improved in 2 days with steroid therapy. Scrotal ultrasonography was useful to diagnose Henoch-Schönlein purpura with scrotal involvement. Steroid treatment appeared to be effective for this condition.

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**Key words:** Henoch-Schönlein purpura, Acute scrotal swelling

### INTRODUCTION

Henoch-Schönlein purpura (HSP) is a systemic vasculitis in children that usually involves the skin, joints, intestinal tract, and kidneys. HSP has been recognized as an unusual cause of acute scrotal swelling<sup>1)</sup>. The sudden onset of acute scrotal pain may be the initial presentation<sup>2,3)</sup>. Color Doppler ultrasonography (US) and radionuclide scanning are useful in the diagnosis of acute scrotal swelling<sup>1,4,5)</sup>. Scrotal US is also useful in evaluating this condition<sup>6-8)</sup>. We describe a case of HSP with acute scrotal pain, which was correctly diagnosed using scrotal US and successfully treated with steroid therapy.

### CASE REPORT

An 8-year-old boy presented to the emergency room 3 hours after the sudden onset of a right scrotal pain. Two days before the onset, the boy had noted some purpuras on the lower extremities. During the two days, the purpura had gradually extended to the entire lower extremities and also the lower abdomen. He had a past medical history of bronchial asthma. Physical examination revealed that the right scrotum was edematous and slightly erythematous, while the left was normal. The scrotal contents were only slightly tender. The affected testis was normal in axis, position, size, and consistency. Scrotal US confirmed the physical findings and also revealed that there was a hydrocele testis around the affected testis (Fig. 1). Laboratory examinations including platelet, serum chemistry, and urine analysis were unremarkable. Urinalysis was negative for blood or protein. The patient was diagnosed with Henoch-Schönlein purpura with scrotal involvement, and was treated with hydrocortisone sodium succinate (100



Fig. 1. Scrotal ultrasonogram showing hydrocele around the affected testis obtained 3 hours after the sudden onset.

mg, once, only the day of the attack). The scrotal swelling and pain as well as purpura was significantly improved the next day. The scrotal symptoms disappeared 2 days after the treatment.

### DISCUSSION

Acute scrotal swelling is an emergent condition. The differential diagnosis in this condition includes diseases requiring immediate surgical treatment, such as testicular torsion. HSP is a systemic vasculitis affecting primarily children and usually involves the skin, intestinal tract, joint, and kidney. The scrotum is sometimes involved as a part of systemic vasculitis. HSP is recognized as an unusual cause of acute scrotal swelling in children<sup>1)</sup>. Scrotal involvement in HSP should be managed conservatively, not surgically. In the diagnosis of acute scrotal swelling radiological examinations evaluating testicular blood flow, such as color Doppler US and radionuclide

Table 1. Scrotal involvement in HSP

Reference	Age (year)	Scrotal involvement <sup>a</sup>	Date of onset (day)	Date of resolution (day)	Treatment	Associated symptoms <sup>b</sup>
2	4	B (R→L) <sup>1</sup>	1	2	Surgical exploration ↓ Conservative	S (R→L)→P+J
3	6	B	6	5	Conservative	P+J→G→S
5	7	B	7	4	Conservative	G→P+S→J
5	7	B	1	7	Conservative	P+S
7	3.5	B	4	1	Steroid	P→S

<sup>a</sup> B; bilateral, R; right, L; left. <sup>b</sup> G; gastrointestinal, J; joint, P; purpura, S; scrotal involvement. <sup>1</sup> First, the right scrotum was involved. One hour later, the right was improved but the left was affected.

scanning are useful to avoid unnecessary surgical exploration<sup>1,4,5</sup>. These examinations show either increased or normal testicular flow<sup>1,4,5</sup>. Scrotal US is also helpful in diagnosing this condition. The scrotal US findings in HSP include thickened scrotal skin, intact testes, hydrocele, and an enlarged rounded epididymis<sup>6-8</sup>.

In our case, we had found some clues to the correct diagnosis. First, the patient had developed purpura on the lower extremities 2 days before the scrotal onset. Second, the scrotal skin was edematous only 3 hours after the onset. In addition, the affected testis was normal in axis, position, size, and consistency compared to the contralateral testis in physical examination. Scrotal US confirmed that there was no significant difference in size or axis between the affected and the contralateral testis and also revealed a hydrocele testis. The physical finding of an edematous, discolored scrotum is usually a late sign and is generally observed after infarction has occurred with testicular torsion<sup>2</sup>. Although the finding of purpura alone was not diagnostic of HSP, the presence of purpura and these clinical findings unusual for testicular torsion strongly pointed to a diagnosis of acute scrotum in HSP with scrotal involvement. The findings of scrotal US in our case were useful in diagnosis and supports the previous findings reported<sup>6-8</sup>.

Scrotal involvement usually improved in a week with conservative therapy, such as rest and ice<sup>2,3,5</sup> (Table 1). In contrast, Ben-Chaim reported a rapid response to systemic steroid therapy<sup>7</sup>. Therefore, our patient received the steroid treatment and the symptoms improved within 2 days. Our case supports the previous report concerning the usefulness of the steroid treatment<sup>7</sup>. The prompt response might be related to early diagnosis before secondary changes such as hematoma had appeared<sup>7</sup>.

In conclusion, we could make a correct diagnosis of HSP with scrotal involvement based upon clinical evidence obtained from careful physical examination and scrotal US. Scrotal US was useful in the diagnosis of acute scrotal swelling. Steroid treatment appeared to be effective in HSP with scrotal involvement.

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和文抄録

急性陰囊症を呈した Henoch-Schönlein 紫斑病の 1 例

横浜南共済病院泌尿器科 (部長: 福岡 洋)

酒井 直樹, 河本 寛治, 福岡 洋

横浜南共済病院小児科 (部長: 黒住浩子)

中島 章子, 黒住 浩子

Henoch-Schönlein 紫斑病は小児にみられる血管炎を伴う紫斑病である。病変が陰囊に及ぶと小児急性陰囊症を呈する。臨床所見より急性陰囊症を伴った Henoch-Schönlein 紫斑病と診断しえた 1 例を経験したので報告する。発症から 3 時間後に施行した陰囊超

音波検査では正常な精巣および精巣水腫の所見が得られた。ステロイド投与により速やかに病状は軽快した。陰囊超音波検査は本疾患の診断に有用であり、ステロイドは治療に有効であると考えられた。

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