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# Henoch-Scholein purpura [Leucocytoclastic Vasculitis]: A case report

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**Abstract**
Henoch-scholeinpurpura is an immune mediated disorder characterized by involving vasculitis of blood vessels leads to inflammation and bleeding. Symptoms include abdominal pain, muscle and joint pain, fever, poor appetite, fatigue. The presence of skin rash is main symptom of leucocytoclastic vasculitis. HSP can affect people in any age but most of cases is seen among children. It is more common in both boy and girls. The exact cause of HSP is unknown, as the disease is immune mediated the immune system is believed to play a major role in targeting the blood vessels. Diagnosis of HSP is very clear when symptoms are seen in patient. When the diagnosis is uncertain biopsy is done. There is no specific treatment NSAIDS, corticosteroids are given. Here we present a 7yrs old female with complaints of fever, rash and joint pains. Biopsy report revealed leucocytoclastic vaculitis. The child was treated with corticosteroids, antibiotic syrup, PPI'S, acetaminophen syrup, dermadew lotion.

**Keywords:** HSP [Henochscholeinpurpura], Vasculitis, Immune-Mediated, Biopsy

## Introduction
Henoch-scholeinpurpura is an immune mediated disorder characterized by involving vasculitis of blood vessels leads to inflammation and bleeding [1]. It may affect the blood vessels of skin joints, intestine and kidneys. HSP can affect people at any age but most commonly seen in children between age 2-11 [3]. It is common in both boys and girls. In some rare cases organs like kidneys, intestine may also get affected [4]. The exact cause of HSP is not known but the body's immune system is believed to play a major role in targeting blood vessels. The incidence of HSP is 6-22 per 1,00,000 persons per year [5]. The symptoms of HSP includes joint pain with swelling, abdominal pain, blood in urine, fever, headache and rarely other organs like brain, spinal cord may also get affected. HSP can cause kidney impairment such as high protein or blood in urine. Diagnosis is mostly done by symptomatic examination and in some cases where the exact diagnosis can't be done then BIOPSY is preferred [6]. The general treatment includes NSAIDS, corticosteroids, Analgesics, Anti-Emetics, Anti-hypertensives in case of renal problem [7].

## Case study
A 7yrs old female patient admitted in hospital with complaints of fever since 4days [moderate to high grade intermittent relief with medication], rash for 4 days [first started in legs, then hand and abdomen], joint pain for 2 days, abdominal pain. She has birth history of renal stones and history of renal disease in their family members. On examination patient is pallor with bilateral pedal edema, facial puffiness, mild dehydration. On day-2 patient experienced joint swelling with purpuric lesion [palpable erythematous lesions] where doctor advised dermadew lotion and HH sone cream. On day-4 she was diagnosed with anaemia [HB:7.7g/dl] but the patient refused for blood transfusion and patient had vomiting where she got administered with Anti-Emetics. On day-7 BP was 154/101mmhg due to renal problem where she was treated with IV labetalol [100mg in 20ml] and proteneuria is seen on day-8 BP was 110/84mmhg hence doctor advised to stop IV labetolol administration.

**Table 1:** Physical examination

| S. No | Day-1 | Day-2 | Day-3 | Day-4 | Day-5 | Day-6 | Day-7 | Day-8 |
|---|---|---|---|---|---|---|---|---|
| HR [beats/min] | 130 | 118 | 101 | 98 | 103 | 96 | 87 | 80 |
| BP [mmhg] | 143/92 | 133/84 | 110/70 | 120/80 | 145/113 | 130/70 | 154/101 | 110/84 |
| RR [breaths/min] | 26 | 22 | 31 | 27 | 25 | 24 | 28 | 26 |

**On laboratory examination**

Sr.potassium: 5.6 mmol/lt [3.5-5.0], Sr.chloride: 108.5 mmol/lt [96-106], Urine analysis: RBC: 20-30 hpf, Epithelial cells: 6-8hpf, Protein/albumin: present, CRP: 12-29mg [<5], Sr.creatinine: 0.73mg/dl [0.3-0.7], Urine protein-24hrs: 1284mg/day [10-150], Urine creatinine-24hrs: 375 [800-2000].

**Table 2:** Laboratory examination

| Lab parameter | Day-1 | Day-2 |
|---|---|---|
| RBC [million cell/cumm] | 3.47 | 4.1 |
| HB [g/dl] | 7.7 | 8.4 |
| PCV [%] | 24.5 | 27.5 |
| MCV [fl] | 70.4 | 68.7 |
| MCH [pg] | 22.2 | 20.9 |
| MCHC [g/dl] | 31.5 | 30.5 |
| RDW [%] | 14.8 | 14.9 |

**Kidney profile**

BUN: 46mg/dl, sr.uric acid: 8.5mg/dl [3.5-7], Sr. calcium: 8.4mg/dl [8.8-10.8], Sr.sodium: 133mmol/lt [134-145], Sr.albumin: 3.1g/dl.

**Biopsy report: Leucocytoclastic Vasculitis**

Based on complaints, lab data and lab investigations finally diagnosed as HSP/leucocytoclastic vasculitis. Patient was treated with antibiotics like Inj. Ceftriaxone, Syrup Augmentin-5ml, syrup P250-5ml, T. Nifedipine 5mg to treat hypertension, INJ. Emeset 4mg to treat vomiting, oral prednisolone [day-3], from day-4 Inj. Methyl prednisolone 500mgOD.

**Discussion**

HSP is named after Eduard Heinrich Henoch, a German pediatrician, and his teacher Johann Lukas Schönlein, who described it in the 1860s [8]. Schönlein associated the purpura and arthritis. Henoch–Schönleinpurpura (HSP), also known as IgAvasculitis, is a disease of the skin, mucous membranes, and sometimes other organs that most commonly affects children. In the skin, the disease causes palpable purpura (small, raised areas of bleeding underneath the skin), often with joint pain and abdominal pain [9]. With kidney involvement- proteneuia is seen. Vasculitis is the inflammation of blood vessels and is also characterized by deposition of igA in body tissues [10]. The exact cause of HSP is not known. seasonal variation play a major role in occurrence of HSP in children along with triggering factors like bacterial and viral infections, vaccinations, drugs, auto-immune mechanisms may result in formation of antigen-antibody complexes and the deposition of this complex in small vessels may result in activation of pathway leading to neutrophil aggregation and finally results in release of inflammatory cells from inflammatory mediators finally leads to inflammation that is vasculitis condition [12].

Our case has symptoms like fever, skin rash, joint pain, abdominal pain. Proteneuria condition is also observed in patient in hospital stay and biopsy report showed leucocytoclastic vasculitis [11]. The role of corticosteroids in treatment of HSP plays a major role. In general prednisolone is most commonly used steroid in treatment of HSP and dexamethasone can also be used in some cases. HSP may also develop due to administration of drugs like streptokinase, acenocoumaral, ciprofloxacin, vancomycin, rosuvastatin [13].

**Conclusion**

Henochscholeinpurpura I one of most common type of vasculitis seen in children between 2-11yrs of age. Clinical presentation of HSP includes fever, skin rash, joint pain, abdominal pain, purpuric lesions in lower extremities of skin. Renal involvement is also seen in some cases where proteneuria and heameturia is seen which makes diagnosis easier. Biopsy is standard diagnostic method to reveal HSP. Early initiation of steroid therapy helps in improving the clinical condition of patient and for better therapeutic outcome. Symptomatic treatment should also be given to patient for symptomatic relief.

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