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Original Research Article

Clinical Profile of H. S Purpura in Children in Teaching Institute

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Abstract:

Background: HENOCH-Schoenlein purpura (HSP) is a multisystem disorder affecting predominantly the skin, joints, gastrointestinal tract and kidneys, although involvement of other organs can occur rarely. It is one of the most common causes of immunoglobulin A (IgA) mediated systemic small vessel vasculitis with IgA deposition in vessel walls leading tosymptoms involving the skin, joints, intestines, and kidneys in children the world-over.

Methods: This hospital based descriptive study was conducted at a major tertiary care teachinghospital in North India. All children were diagnosed as HSP, according to the 2010 EuropeanLeague against Rheumatism criteria7, admitted at various wards in the Department of Paediatrics, during the period of six months from June 2021 to December 2021 were includedin the study

Results: In this study, 65 patients were included. The mean age at presentation was 6.5 years (Range 2 to 12 years). There were 40 boys and 25 girls with a male preponderance (male to female ratio 1.6:1). The common presenting symptoms were purpuric rash (n=65,100 %) , painabdomen (n=42,64%), and arthritis (n=28,44), vomiting (n= 16,24%), Malena (n=3,5%), genitourinary symptoms like hematuria (n=3,4%), scrotal pain(n=4,6%), oedema(n=10,15%), hypertension(n=20,30%) were seen .In the laboratory parameters An elevated ESR (n=31,48%), anaemia(n=33,50%) , leucocytosis seen in 5 cases (18%), thrombocytosis in 13 (20%) patients . ASO titre of >200 was found in 10 (15%) patients. Abnormal urine analysis in 10 (15%) patients. Rheumatoid factor was positive in 17(4%) also stool for occult was positive in 12(19%) cases.

Conclusion: The clinical features of Henoch Schonlein purpura in the population were different from the previously published studies. Renal involvement was less common theoccurrence of life-threatening complications in HSP is very rare

Keywords: HSP, India, Clinical Profile.

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Introduction

HENOCH-Schoenlein purpura (HSP) is a multisystem disorder affecting predominantly the skin, joints, gastrointestinal tract and kidneys, although involvement of other organs can occur rarely. It is one of the most common causes of immunoglobulin A (IgA) mediated systemic small vessel vasculitis with IgA deposition in vessel walls leading to symptoms involving the skin, joints, intestines, and kidneys in children the world-over [1-5] This autoimmune vasculitis is characterized by multi organ involvement in the form of non-thrombocytopenic palpable purpura, abdominal pain, arthritis and haematuria. The annual incidence of Henoch SchoenleinPurpura in children is around 14-20 per 1,00,000 population. [6] It usually has a self-limited course but has the potential to cause serious life-threatening complications including gastrointestinal perforation and end stage renal disease. Although the clinicopathological profile of HSP has been studied before, data from the northern part of our country are lacking. Hence, this study was planned to describe the clinical profile of HSP in children admitted in our institute

Methods

This hospital based descriptive study was conducted at a major tertiary care teaching hospital in North India. All children were diagnosed as HSP, according to the 2010 European League against Rheumatism criteria[7], admitted at various wards in the Department of Paediatrics, during the period of six months from June 2021 to December 2021 were included in the study. A detailed history and systemic examination were done in all the patients. The criteria include palpable purpura which is a mandatory criterion with the presence of at least one of the following features such as diffuse abdominal pain, any biopsy showing predominant IgA deposition, arthritis or arthralgia, and renal involvement in the form of haematuria and/or pro-

teinuria These children were followed up for six months to detect complications like renal involvement etc. Renal involvement included haematuria (>5 red blood cells/hpf) and proteinuria ≥ 2+ by heat and acetic acid test or 24-hour urine protein >4mg/m2 /hour and/ or blood pressure greater than 95th percentile for age and gender [8].

In the included patients, the data collected included age, gender, clinical presentations, and findings. Laboratory data including complete blood count, C-reactive protein, erythrocyte sedimentation rate (ESR), complete urinalysis, and stool for occult blood. Ethical clearance was obtained from the institutional ethics committee.

Statistical Analysis

Statistical analysis was performed using descriptive statistics (frequency), Pearson chi square test and student t test. A P value of less than 0.05 was considered as statistically significant. Statistical package of social science software was used for statistical analysis.

Results

In this study, 65 patients were included. The mean age at presentation was 6.5 years (Range 2 to 12 years). There were 40 boys and 25 girls with a male preponderance (male to female ratio 1.6:1). The common presenting symptoms were purpuric rash (n=65,100 %) in all of the cases, followed by pain abdomen (n=42,64%), and arthritis (n=28,44%) (Table 1).

Other gastrointestinal manifestations like vomiting (n= 16,24%), Malena (n=3,5%) were present. Genitourinary symptoms like haematuria (n=3,4%), scrotal pain(n=4,6%), oedema (n=10, 15%), hypertension(n=20,30%) were seen. However none of them has oliguria or acute renal failure.

Table 1: Clinical profile

Clinical features	Frequency (n)	Percentage
Mean age range	2 to 12 years	
Male: female	1.6	
Purpuric rash	65	100
Pain abdomen	42	64
Vomiting	16	24
Arthritis	28	44
Hypertension	20	30
Malena	3	5
Scrotal pain and swelling	4	6
Subcutaneous oedema	10	15
Haematuria	3	4

*More than one finding was seen in all the children

Varying combinations of involvement of skin, joint, abdomen and the kidneys were seen during the disease course. When the laboratory parameters were assessed (Table 2), the mean platelet count was found to be 215,000 (240,000–540,000) L/mm3 and mean hemoglobin level was 7.2 (7.8–12 gm/dl). An elevated ESR (n=31,48%) and anemia(n=33,50%) was present. Leucocytosis was seen in 5 cases (18%), thrombocytosis in 13 (20%) patients with a mean platelet count of 2.65 L/mm3. ASO titre of >200 was found in 10 (15%) patients. Abnormal urine analysis was noticed in 10 (15%) patients, of which major abnormality was hematuria (n = 7, 7%). (Table 2). Rheumatoid factor was positive in 17(4%) also stool for occult was positive in 12(19%) cases.

Table 2: laboratory parameters

Lab parameter	Frequency (n)	Percentage
Anaemia	33	50
Leucocytosis	5	18
High ESR	31	48
Thrombocytosis	13	20
Stool for occult blood	12	19
ASO positive	10	15
Rheumatoid factor	17	4
Abnormal urinalysis	10	15
Abnormal renal function	7	10

Discussion

The mean age of onset of symptoms was 6.5 years with a male preponderance which is comparable to other studies [9-11]. In our study palpable purpura was seen in all the patients as seen in a study by Trapani et al, [13] purpura occurred in 100% of patients at some point during the course of the illness. Similar to our study, in previous studies rash was present predominantly in lower limbs and buttocks [16].

The classical gastrointestinal manifestations of HSP consist of nausea, vomiting, diarrhoea, constipation, abdominal pain, malena. Gastrointestinal manifestations in a study by Abbas et al [9] and Krishnan et al 14included abdominal pain in 56%, vomiting in 35% and melena in 19%. Comparable results to these were observed in our study with abdominal pain in 42(64%), vomiting in 16 (24%) andmalena in 3(4%) none of them needed laparotomy.

Arthritis was seen in 44 of patients in our study with knee joint being most commonly affected. The incidence of arthritis in our study was lower than that in a study by Jauhola et al, [15] in which 90% of patients showed evidence of joint involvement.

Renal involvement is one of the dreaded manifestations in HSP. Renal involvement was defined as the presence of gross or microscopic haematuria with or without proteinuria. However, it was seenonly in 5% of our patients and in most of the studies it ranged between 11% and 31% (27%) [17]

Various studies have reported scrotal involvement in HSP cases approximately in 10% of cases [18], in our study it was 6 %. Acute scrotal involvement might include scrotal rash and edema of scrotal soft tissue. It might be either unilateral or bilateral, and this pain mimics testicular torsion, though true torsion is rare. Hour study didn't have any case of testicular tortion.

There is no specific diagnostic test for HSP. Anaemia was seen in 50% of patients, thrombocytosis in20%, raised ESR 48% in a study by Abbas et al [19], anaemia was seen in 48%, raised ESR in 48% and thrombocytosis in 19% of patients quite comparable to our study. Stool occult blood was positive in 19% of patients, which was comparable to that in other studies

Conclusion

HSP appears to be quite common in the north part of our country with male preponderance interms of involvement .Spontaneous recovery is seen with symptomatic management. The clinical profile of HSP in children was similar to that found in other studies except for renal involvement, which was much lower in this study. The occurrence of life-threatening complications in HSP is very rare. There is a requirement for large scale prospective study to establish the standardized treatment protocol for HSP

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