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IDEOPATHIC THROMBOCYTOPENIC PURPURA "CLINICAL MANIFESTAION, AETIOLOGY AND TREATMENT"

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ABSTRACT

Ideopathic Thrombocytopenic purpura (ITP) is a hematological disorder characterized by isolated thrombocytopenia. The major causes of platelets consumption include immune thrombocytopenia, decreased bone marrow production and increased splenic sequestration. The onset may be acute or insidious, laboratory tests are useful at first visit. We present cases of ITP with clinical presentation, diagnosis and management.

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INTRODUCTION

Normal platelet counts between 150,000-450,000/cmm. A level below 150,000/cmm considered to be thrombocytopenia. Mucocutaneous bleeding is major clinical manifestation. Surgery, trauma with platelet counts below 20,000/cmm are at risk of spontaneous bleeding (1). ITP is common among children usually preceded by acute viral infection due to platelet associated IgG rarly IgM which increase splenic destruction of platelets. Resolution rate in children is 80 – 90%, in contrast to greater risk of being chronic ITP in adults. ITP classified on the basic of pathological mechanism, inciating agents, duration of illnesses into (2) classes (2)

- Acute ITP.
- Chronic ITP.

Acute ITP: onset of acute viral infection is common in children 90% of cases. 60% of them recover within 3-9 months.

Chronic ITP: referred to those children in whom thrombocytopenia persist more than 6 months.

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Clinical feature: Onset of disease is acute, peak age between 2-5 years, which is peak age of viral infection, No sex predilection. Sudden onset of easy bruises, peticheal bleeding between 1-3 weeks after viral infection. Epistaxis, oral and gastrointestinal bleeding are seen less frequently 5-10% of them have splenomegaly. Mortality rate is 1% due to intracranial hemorrhage. While patients with chronic ITP have insidious onset, prolong clinical course lasting more than 6 months (3).

Laboratory finding: Complete blood picture usually normal except for moderate to severe thrombocytopenia. Hb, RBC, differential counts are normal. Few platelets on blood film. Prolong bleeding time. Normal PT, PTT. Bone marrow shows increase number of megakaryocytes, with erythroid hyperplasia (4).

Differential diagnosis

- A plastic Anemia.
- Liver diseases like lipidosis, reticuloendotheliosis.

ITP is first sign of autoimmune disease like: **(**SLE, rheumatoid arthritis, Nephritis**),** leukemia and lymphoma (5)

Treatment: Platelet count below 20,000/cmm is an indecation for hospitalization and in cases of significant bleeding.

- **Steroid:** role of corticosteroids to suppress immune system.
- **Intravenous immunoglobulin IVIG:** To decrease the rate of macrophage consume Ab-tagged platelet. IVIG can rapidly increase platelet count.
- **Anti D:** suitable for RH(+ve) patients.
- **Steroid sparing agents:** As Azothioprime usually in chronic ITP**.**
- **Thrombopoietin receptor agonists:** Stimulate bone marrow production of platelets.
- **Surgery:** indicated in patients not responded to medical treatment and in frequent relapses.
- **Platelet transfusion:** not recommended except in emergency cases (6).

PATIENTS AND METHODS

Prospective study on 75 patients with ITP admitted to AL-Khansa teaching hospital between 1/12/2017 till 1/2/2019. Information regarding name, age, sex, clinical symptoms, signs, duration of illnesses, precipitating factors, drug history, family history, lab. tests, choice of therapy, out come all have been reported.

Aim of study

- Assessment the clinical presentation of admitted cases.
- Observe severity of the disease below 11 years based on etiological factors.
- Treatment modalities.

RESULTS OF THE STUDY

Table 1. Age differences

Age (years)	No. of patients	%
1-3	23	29.3%
3-5	27	36 %
5-7	11	16.7%
7-9	7	9 %
9-11	7	9 %
Total	75	100%

Table 2. Sex differences

Sex	No. of patients	%
Male	33	44%
female	42	56%
Total	75	100%

Table 3. Clinical manifestation

Symptoms	Acute ITP%	Chronic ITP%	Total %
Bleeding under skin (purpura petichae,ecchymosis)	65(100)%	10 (100)%	75 (100)%
Epistaxis	19 (29.4)%	6 (60)%	25 (33.3)%
Bleeding per gum	17 (26.4)%	3 (30)%	20 (26.6)%
Haematemesis	2 (3.1)%		2 (3.1)%
Malena	1 (1.5)%		1 (1.5)%
Haematuria	1 (1.5)%		1 (1.5)%
Signs	Acute ITP%	Chronic ITP%	Total %
Petechiae	65 (100)%	10 (100)%	75 (100)%
Pallor	7 (10.7)%	4 (40)%	11 (14.6)%
Jaundice	1 (1.5)%		1 (1.3)%
Splenomegally	5 (7.6)%	2 (20)%	7 (9.3)%
Hepatomegally	11 (16.9)%	1 (10)%	12 (16)%
Lymphadenopathy	7 (10.7)%	1 (10)%	8 (10.6)%

Table 4. Line of therapy in acute ITP (65 patients)

Drugs	No. of acute ITP	Duration of hospitalization			platelet counts	
		1 week	1-2 week	>2 week	<50,000 /cmm	>50,000 /cmm
Steroid	27 (41)%	10 (15)%	14 (21.5)%	3 (4.6)%	3 (9.6)%	24 (36)%
Gamaglobulin	12 (18)%	9 (13.8)%	3(4.6)%		1 (1.5)%	11 (16.9)%
Steroid and Gamaglobulin	7 (10.7)%	1 (1.5)%	6 (9.2)%		2 (3)%	5 (7.6)%
Blood and Platelet	5 (7.6)%	5 (7.6)%			2 (3)%	3 (4.6)%
Observation	5 (7.6)%	4 (6.11)%	1(1.5)%		2 (3)%	3 (4.6)%
blood or platelet with steroid	9(13.8)%	2 (3)%	7(10.7)%		1(1.5)%	8 (12)%

Table 5. Line of therapy of chronic ITP (10 patients)

Drugs	No. of patient	Durat of hospitalization		Platelet count	
Steroid	3 (30)%	1 week	1-2 week	<50,000	>50,000
		3 (30)%		2 (20)%	1 (10)%
Gamaglobulin	1 (10)%		1 (10)%		1 (10)%
Steroid and Gamaglobulin	2 (20)%	1 (10)%	1 (10)%	1 (10)%	1 (10)%
Steroid and Platelet	1 (10)%		1 (10)%		
Splenectomy	2 (20)%		2 (20)%	1 (10)%	2 (20)%
Observation	1 (10)%	1 (10)%			1 (10)%

Table -6- Follow up of ITP patients

Discharge on good general condition	No. of patients	%
No need for retreatment	68	(90)%
Readmitted for evaluation	7	(9.3)%
Total	75	(100)%

DISCUSSION

The study was carried on 75 ITP patients and pointed several marks: First the highest frequency of the cases were encountered among the age of (1-5) years with mean age of 5 years (7). Female predominance in a ratio 1.27/1 compare to male. The age of onset was mostly below 5 years 62.6%. upper respiratory tract infection was trigger factor of the disease in about 58.6% , while sudden onset was observed in 41.3% (8). This goes what published previously that 70% of cases due to antecedent disease such as viral upper respiration tract infection and the reason was mentioned before. There is an increase amount of antibodies located on the surface of the platelet that enhance a rapid destruction of the platelet leading to thrombocytopenia. In study done by Trabelsi-M. , Zeougha-R in 1988 a retrospective study of 98 cases of ITP in children age group of 5 years.(9) Preceded by viral infection in 45% of cases. While sudden onset was observed in 81%. Platelet count was below 20,000/cmm in 78.5% while chronic ITP encountered about 11% of patients, despite medical treatment, in our study predominant cases had platelet count below 20,000/cmm account 53.3% . 40% of cases platelet count was between 20,000/cmm-50,000/cmm. 6% of cases had platelet count above 50,000/cmm. Nearly all cases had skin manifestation in our study 100% (10).

Summary

A hospital based study on 75 patients admitted during period of (1/12/2017 up to 1/2/2019) was made to asses clinical presentation, aetiology and line of treatment. 42 females (56%) and 33 males (44%) between age 1 year till 11 years. Majority of cases were less than 5 years of age. Diagnosis based on clinical and lab. tests. Most patient presented with bleeding under skin (100%) , then mucocutaneos bleeding . History of upper respiratory infection in (58.6%) of patients, while (41.3%) with no triggering factors.

Most patients had platelet count below 20,000/cmm, (53.3%) with significant rise of platelet count among patients received IVIG. and duration of hospitalization also shorter in comparism to those patients received steroid therapy. There was no death, and low relapse rate. While epistaxis in 33.3% from total patients bleeding per gum 26.6%, haematermisis in 3.1% malena 1.5% haematermisis 1.5% skin manifestation (purpura, petichae, and ecchymosis) in acute and chronic ITP was 100%.

Recommendation

The diagnosis of ITP should be treated as medical emergency. The initial diagnosis should be made on clinical history, examination and routine laboratory tests including blood film. If platelet counts are less than 50,000/cmm with clinically relevant bleeding is present. First line of treatment is IVIG or corticosteroid. The recommended dose starting with IVIG is 1g/kg. Recommended prednisolone starting doses vary from 0.5-1 mg/kg daily. Medications are adjusted to maintain a safe platelet count.

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