ISSN: 0975-3583, 0976-2833 VOL14, ISSUE3, 2023

Original Research Article

TO DETERMINE THE HEMATOLOGICAL FINDINGS & COAGULATION PROFILE THE SPECTRUM OF DISEASES IN PATIENTS WITH BLEEDING MANIFESTATIONS

Dr. Rajshekar S Jewargikar[1] MD (Consulting Pathologist)

Sai Diagnostic Laboratory Opp. Big Bazzar Kalaburgi 585101 Karnataka[1]
Corresponding Author: Dr. Rajshekar S Jewargikar

Abstract

Background & Methods: The aim of the study is to determine the hematological findings & coagulation profile the spectrum of diseases in patients with bleeding manifestations. A blood pressure cuff inflates around the upper arm of patient. While the cuff is on the arm, a prick is given on the fingertip. It is just deep enough to cause a tiny amount of bleeding. The blood pressure cuff is immediately deflated. Blotting paper is touched to the cuts every 30 seconds until the bleeding stops.

Results: Non Malignant lesions are more common than Malignant lesions in bleeding disorders. Non Malignant lesions constitute 84% of the all causes while 16% of the remaining causes are contributed by Malignant lesions. Among 50 cases, 27 cases have mild anemia (Hb- 7-12 g/dl) while 20 cases presented with severe anemia (Hb- <7g/dl).

Conclusion: Males are found to be affected slightly more commonly (54%) than females (46%). Non malignant lesions (84 %) more common than malignant lesions (16%). Our study reveals 20 cases with severe anemia (Hb- <7g/dl) and largest number of patients 27. It is also our observation that many patients having hemostatic disorders do not necessarily have prolonged bleeding or clotting time which means that hemostasis is dependent on many other unknown in vitro.

Keywords: hematological, coagulation, bleeding & manifestations.
Study Design: Observational Study.

1. INTRODUCTION

The human body cannot handle excessive blood loss well. Therefore, the body has ways of protecting itself. Hemostatis is one of them. When, for some unexpected reason, sudden blood loss occurs, the blood platelets kick into action[1]. When bleeding from a wound suddenly occurs, the platelets gather at the wound and attempt to block the blood flow. The mineral calcium, vitamin K, and a protein called fibrinogen help the platelets form a clot.

A clot begins to form when the blood is exposed to air. The platelets sense the presence of air and begin to break apart. They react with the fibrinogen to begin forming fibrin, which resembles tiny threads[2]. The fibrin threads then begin to form a web-like mesh that traps

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE3, 2023

the blood cells within it. This mesh of blood cells hardens as it dries, forming a clot, or "scab."

Bleeding disorders constitute an important group of disorders in haematology. Abnormalities of platelet function & clotting factors are characterized by clinical bleeding of varying severity. All diseases of inadequate hemostasis have spontaneous bleeding (petechiae, purpura, mucous membranes, GI bleeding, hematuria, into joint spaces, or even just unusually heavy periods) and/or excessive bleeding after trauma or surgery[3].

The hemostatic system consists of platelets, coagulation factors, and the endothelial cells lining the blood vessels. Under normal circumstances, the resistance of the endothelial cell lining to interactions with platelets and coagulation factors prevents thrombosis[4]. When endothelial continuity is disrupted and the underlying matrix is exposed, a coordinated series of events are set in motion to seal the defect (primary hemostasis)[5].

2. MATERIAL AND METHODS

The present study is hospital based prospective being undertaken in the Department of pathology. The cases presenting with bleeding manifestations in Tertiary Care Centre for 01 Year on 50 patients & the cases retrieved from the archives reporting for complete blood picture for 01 Year.

A blood pressure cuff inflates around the upper arm of patient. While the cuff is on the arm, a prick is given on the fingertip. It is just deep enough to cause a tiny amount of bleeding. The blood pressure cuff is immediately deflated. Blotting paper is touched to the cuts every 30 seconds until the bleeding stops. The time taken for the cuts to stop bleeding is recorded. Bleeding normally stops within 1 to 8 minutes. However, values may vary from lab to lab.

3. RESULT

Table 1: Gender Distribution

Sex	Frequency in No.	Percentage
Males	27	54
Females	23	46
Total	50	100

Out of 50 study cases, males are more commonly affected (54%) than females (46%).

Table 2: Clinical Manifestations

Symptoms	No of Cases	Percentage
Gum bleeding	10	20
Epistaxis	08	16
Petechiae, purpura	07	14
Fever	05	10
Ecchymosis	04	08
Hematuria	01	02

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE3, 2023

Melena	02	04
Hemetemesis	02	04
Menorrhagia	04	08
Hematoma	01	02
Hemoptysis	02	04
Hemarthrosis	01	02
Post traumatic	01	02
Hematochezia	01	02
Umblical bleeding	01	02

Most Common bleeding manifestation found to be Gum Bleeding in 20% cases.

Table 3: DISTRIBUTION OF CASES ACCORDING TO TYPE OF LESION

Bleeding disorders	**Total no. of Cases**	**Percentage**
Non Malignant lesions	42	84
Malignant lesions	08	16
Total	50	100

Non Malignant lesions are more common than Malignant lesions in bleeding disorders. Non Malignant lesions constitute 84% of the all causes while 16% of the remaining causes are contributed by Malignant lesions.

Table 4: Haemoglobin level in Study Cases

Hb in g/dl	**Total cases**
<7	20
7--12	27
>12	03

Among 50 cases, 27 cases have mild anemia (Hb- 7-12 g/dl) while 20 cases presented with severe anemia (Hb- <7g/dl).

4. DISCUSSION

A study carried out a study on prevalence of hematological disorder on 177 patients at Faridpur. As a result they found maximum 41 (23.16%) cases were in 10-19 years age group and lowest 6 (3.39%) in above 70 years age group. The age ranged from 3.5 years to maximum 80 years with a mean age 27.05 years. Out of 177 patients, 111 (62.71%) were male and 66 (37.29 %) were female in a ratio of 1: 0.59[6].

Retrospective descriptive study of 408 patients of hemostatic disorder found the median age of 17 years with a range of three to 57 years. There were 329 (80.6%) males and 79 (19.3%) females

A study where a total of 164 cases were examined, maximum number of them belongs to 11-15 years age group. Out of these 152 were males and 12 were females[7]. Likewise found in

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE3, 2023

their study conducted in Qatar during the period 2000-2005 found that 82% cases were between 1-10 years and males had nearly an equal distribution 57.9% with females 42.1%
Retrospectively reviewed the charts of cases who presented with menorrhagia between January 1990 and November 1998 found that the most common causes were immune thrombocytopenic purpura followed by myelosuppression caused by chemotherapy[8].
The same results as our study where out of 7 diagnosed cases presenting with acute menorrrhagia, 4 (57%) cases were of immune thrombocytopenic purpura, two cases of Van Willebrand disease and one case of acute promyelocytic leukemia[9].

5. CONCLUSION

Males are found to be affected slightly more commonly (54%) than females (46%). Non malignant lesions (84 %) more common than malignant lesions (16%). Our study reveals 20 cases with severe anemia (Hb- <7g/dl) and largest number of patients 27. It is also our observation that many patients having hemostatic disorders do not necessarily have prolonged bleeding or clotting time which means that hemostasis is dependent on many other unknown in vitro.

6. REFERENCES

1. Bowen DJ: Haemophilia A and haemophilia B: molecular insights. Mol Pathol 2002; 55:1
2. Harrison P, Horton A, Grant D, et al. Immunoplatelet counting: a proposed new reference procedure. Br J Haematol.2000;108:228-235.
3. Mansouritorghabeh H, Manavifar L, Banihashem A, et al. An investigation of the spectrum of common and rare inherited coagulation disorders in north-eastern Iran. Blood Transfus 2013;11:233-40.
4. Farjami A, Haghpanah S, Arasteh P, et al. Epidemiology of hereditary coagulation bleeding disorders: a 15-year experience from Southern Iran. Hospital Practices and Research 2017;2: 113-7.
5. Sharma SK, Kumar S, Seth T, et al. Clinical profile of patients with rare inherited coagulation disorders: a retrospective analysis of 67 patients from northern India. Mediterr J Hematol Infect Dis 2012;4:e2012057.
6. Fışgın T, Balkan C, Celkan T, et al. Rare coagulation disorders: a retrospective analysis of 156 patients in Turkey. Turk J Haematol 2012;29:48-54.
7. Jaouad IC, Elalaoui SC, Sbiti A, Elkerh F, Belmahi L, Sefiani A. Consanguineous marriages in Morocco and the consequence for the incidence of autosomal recessive disorders. J Biosoc Sci 2009;41:575-81.
8. Şalcıoğlu Z, Bayram C, Şen H, et al. Congenital factor deficiencies in children: a report of a single-center experience. Clin Appl Thromb Hemost 2018;24:901-7.
9. Peyvandi F, Kaufman RJ, Seligsohn U, et al. Rare bleeding disorders. Haemophilia 2006;12(Suppl 3):137-42.