Role of bleeding score and laboratory testing in women with menorrhagia to identify inherited bleeding disorders: the experience of a tertiary care hospital in South India

Dr Annamma Kurien *, Ms Sulochana B**, Mr. Javed Ahammad*

*Dept of Pathology, Melaka Manipal Medical College, Manipal University, Manipal, Karnataka , India ** Manipal College of Nursing, Manipal University, Manipal, Karnataka, India

Introduction

Bleeding disorders in women and menorrhagia due to bleeding disorders are neglected areas. Inherited defects in hemostasis are seen in **10-25**% of women. These can cause serious complications during childbirth, surgeries and trauma. Bleeding assessment tool and laboratory tests can be complementary in identifying inherited disorders.

Objectives

- Study the incidence of inherited bleeding disorders (BD) in women with menorrhagia
- Correlate bleeding score (BS) and lab testing in women with and without inherited bleeding disorders

Material and Methods

Study Design

- Prospective survey design.
- 128 women with menorrhagia referred to Kasturba Hospital, Manipal, Karnataka, South India during 2012 -2015 were included

Data Collection procedure

- ISTH- BAT was administered by a trained hemophilia nurse
- Bleeding Assessment Tool (BAT) consisted of 15 bleeding symptoms and 114 questions

  Scoring system: Each symptom was scored from 0 to 4.
- Patients were tested by a panel of tests
- Screening tests were done in all patients
- Specific tests were done at a later date, at the discretion of the clinician and based on the bleeding score.
- Bleeding score of 2 and above was considered significant.

Screening tests done were BT, PT, PTT, TT, Factor XIII screen, platelet count, clot retraction, direct smear (Hemostatic Workup).

Specific tests included mixing studies, factor assays, vWF assay and platelet aggregation studies

- Data were analyzed

Results

128 women with menorrhagia were tested for bleeding disorders of which 22 (17%) had bleeding disorders.

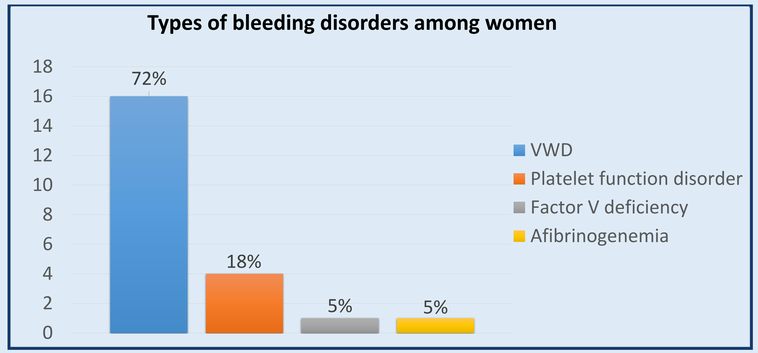

Table 1: Characteristics of patients with vWD — N - 16

1. Bleeding score	
• BAT 3	09 (56%)
• BAT >3	07 (44%)
2. Hemostatic screen	
• Positive	04 (25%)
• Negative	12 (75%)
3. Consanguinity	
• Yes	15 (94%)
• No	01 (06%)
4. No. of bleeding symptoms	
• Only one (menorrhagia)	09 (56%)
• More then one	07 (44%)

- In patients with VWD, 9(56%) had bleeding score > 3, 9 (56%) had only menorrhagia and 12 (75%) had normal hemostatic work up.
- BAT was >3 in 83% of other inherited bleeding disorders.

Table 2. Bleeding symptoms and bleeding score — N - 128

Characteristics	Confirmed BD (N=22)	Suspected Cases (N=106)
1. No of bleeding symptoms		
• One	12 (54%)	98 (93%)
• Two	3 (14%)	03 (3 %)
• Three	3 (14%)	04 (4%)
• More than three	4 (18%)	01 (1%)
2. Bleeding Assessment Score (BAT)		
• Zero	0	08 (8%)
• One	1(5%)	23 (22%)
• Two	0	46 (43%)
• Three	11(50%)	14 (13%)
• Four or more	10(45%)	15 (14%)
3. Hemostatic workup		
• Normal	10(45%)	102 (96%)
• Abnormal	12 (55%)	04 (4%)

Suspected cases (N-106)

- 98 (93%) had only menorrhagia as the bleeding symptom while 8(7%) had more than one bleeding symptoms.
- 46 (43%) were tested for VWF assay and the results were normal.
- 102 (96%) cases had normal hemostatic screen and 4 cases (3.8%) had abnormal hemostatic screen.
- 29 cases had BS ≥ 3. Five (5) patients had VWF assay and platelet aggregation studies done, which were normal.

Limitation

- Specific tests were not done in all cases with significant bleeding scores (≥ 3).

Conclusion

- Incidence of inherited disorders in menorrhagia is 17%..
- Women with inherited disorders had a significant BS.
- Screening tests were normal in 75% cases of vWD and 92% of suspected women with menorrhagia.
- BS of 3 may be considered to be significant.
- Complete workup with specific tests is required when BS is ≥ 3.

References / Bibliography

1. Rodeghiero F, Tosetto A, Abshire T, Arnold DM, Coller B, James P,Neunert C, Lillicrap D. ISTH/SSC bleeding assessment tool: a standardized questionnaire and a proposal for a new bleeding score for inherited bleeding disorders. J Thromb Haemost 2010; 8: 2063–5.
2. Philipp SC, Faiz A, Dowling N, Dilley A, Michaels L A. et all. Age and the Prevalence of Bleeding Disorders in Women With Menorrhagia. The American College of Obstetricians and Gynecologists, 2005; 1:105.
3. Byams VR, Kouides PA, Kulkarni R, et al. Surveillance of female patients with inherited bleeding disorders in United States Haemophilia Treatment Centres. Haemophilia. 2011;17(Suppl 1):6–13.
4. James H A, Women and bleeding disorders. Haemophilia. 2010, 16 (Suppl.5) 160-167.