USEFULNESS OF ISTH BLEEDING ASSESSMENT TOOL IN THE PREDICTION OF BLEEDING DISORDERS IN SUSPECTED PATIENTS REFERRED TO A TERTIARY CARE HOSPITAL IN INDIA

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Introduction

- A definitive bleeding history is a prerequisite for diagnosis of a bleeding disorder.
- ISTH- Bleeding Assessment Tool(BAT) with questionnaire and bleeding score(BS)was proposed to describe bleeding symptoms and relate them to the diagnosis of bleeding disorders.
- Clinical and diagnostic utility of BAT have not been studied extensively.
- It is general practice to do a battery of tests to diagnose a bleeding disorder in any suspicious case.
- Prediction of bleeding disorders through BAT may help to make laboratory testing more cost effective.

Aims of the study

1. Correlate BS with definitive diagnosis of bleeding disorders.
2. Study the usefulness of BAT in suspected patients.
3. Study the utility of BAT in suspected patients with normal screening tests

Materials and Methods

- Retrospective observational study
- 62 patients with suspected bleeding disorders referred to Kasturba Hospital , Manipal , Karnataka, South India were included
- ISTH- BAT was administered by a trained hemophilia nurse to the study group
- 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 BAT
- 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 and positive predictive value was determined

ISTH-Bleeding Assessment Tool (BAT)

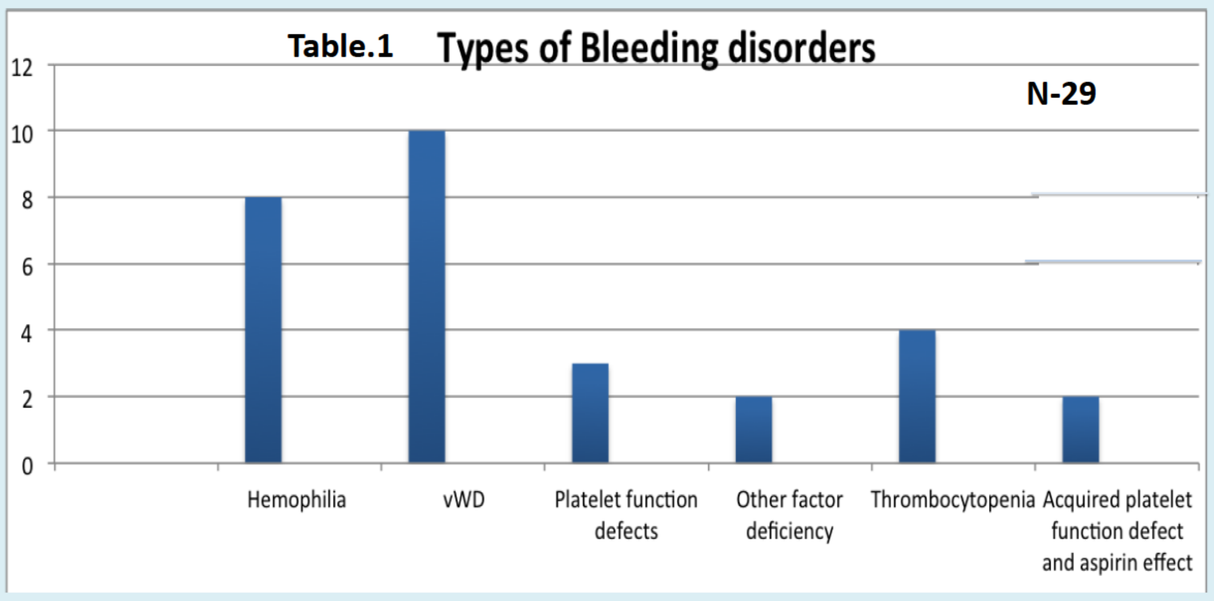
BAT consists of 14 bleeding symptoms and related questions

Scoring system: Each symptom was scored from 0 to 4.

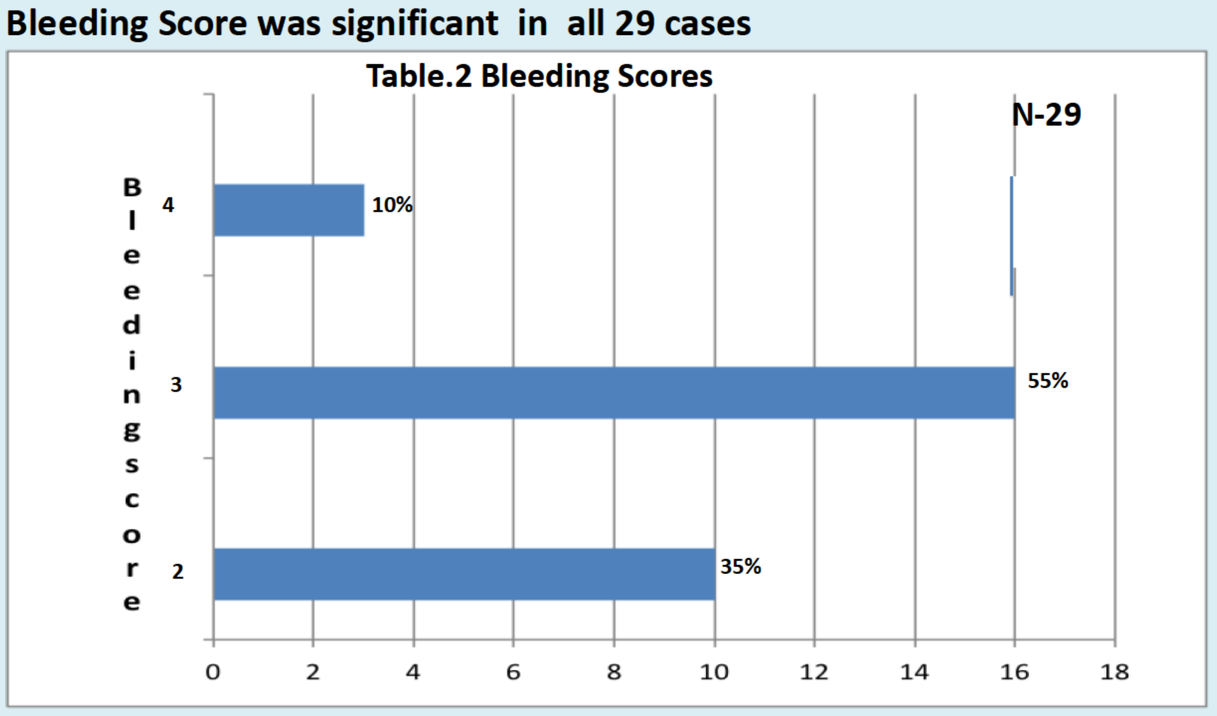
- Epistaxis
- Cutaneous
- Bleeding from minor wound
- Oral cavity
- GI Bleed
- Hematuria
- Tooth extraction
- Surgery
- Menorrhagia
- Post partum hemorrhage
- Muscle hematoma
- Hemarthrosis
- CNS bleed
- Other bleeds

Results

- **62 patients with suspected bleeding disorders**
- **29 were found to have a bleeding problem**



Bleeding Score was significant in all 29 cases



- Multiple sites of bleeding were seen in 7 cases.
- Screening tests were normal in 6 of these cases (21%)

29/62 patients had normal screening tests.

Bleeding Score was significant in 23 cases(79%)

- BS - 2 in 14 cases
- BS - 3 in 8 cases
- BS - 4 in 1 case

The one patient with BS 4 had all specific tests within normal limit.

All these patients were advised specific confirmatory test/repeat testing.

Conclusion

- All patients with bleeding disorder had significant bleeding score.
- In patients with bleeding disorders having significant bleeding score, the hemostatic work up gave a positive predictive value of 0.79 in having a bleeding disorder
- In a suspected patient with normal screening tests and bleeding score more than 2, further testing is required to confirm a bleeding disorder.
- The reliability of BAT in patients with normal hemostatic screen is questionable.

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