



TRANSMEDCON 2016
Safe Blood - Healthy India
सुरक्षित रक्त - हर जीवनदायिनी बूट से स्वस्थ भारत

Does Miniscreen minimizes transfusion ?

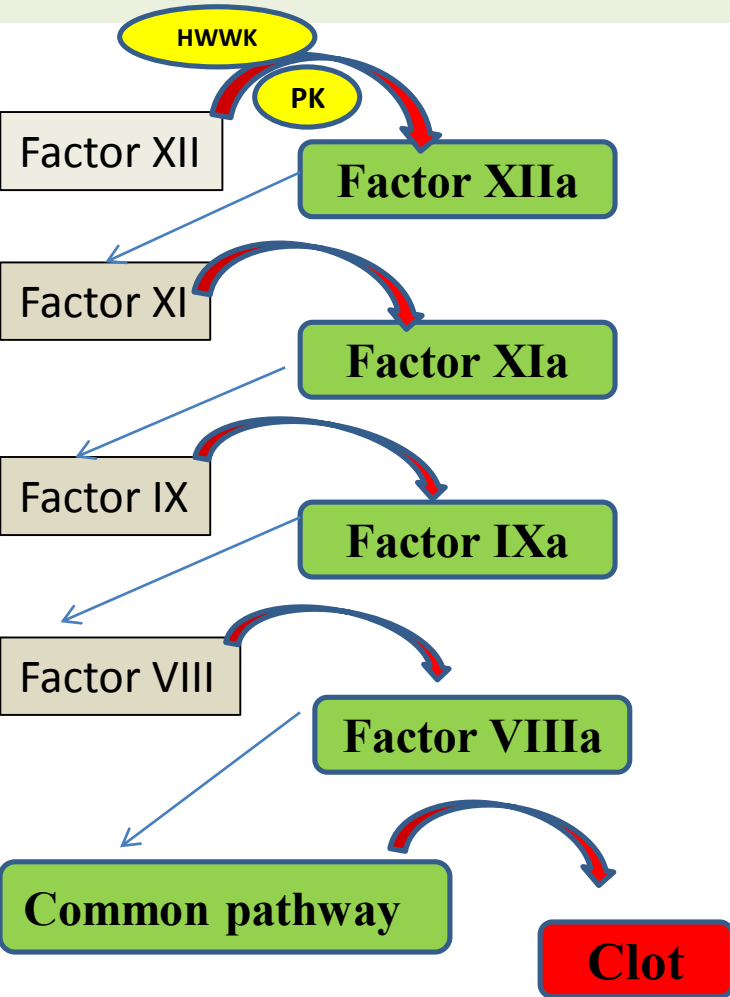
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APTTa screening test

- APTT, one-stage and sensitive screening test is originally designed to screen for hemophilia disorders.
- APTT use has been expanded over the years to include monitoring of unfractionated heparin therapy and as *a pre-operative hemostatic screen* etc.
- The degree of prolongation of the APTT does not have any predictive value regarding hemostasis.
- Fresh frozen plasma (FFP) is a blood product rich in various coagulation factors that have often been used to correct the coagulopathy with prolonged APTT.

.....Concepts of APTT miniscreen



Prolonged APTT

Pre analytical error

Coagulation factor deficiency

Coagulation factor inhibitor

Lupus anticoagulant etc.

Factor	Bleeding
XII def.	N
XI >30-40%	N
IX>50%	N
VIII>50%	N

APTT mini screen measure individual level of factor VIII, IX, XI and XII by using single dilution screen test.

To study the effect of introduction of APTT miniscreen on the rate of FFP transfusion in patients undergoing an invasive procedure.

.....study design

Does Miniscreen minimizes transfusion?

Retrospective study - March 2016 to September 2016



Pre-procedural/surgical consultation due to Isolated prolonged APTT



APTT miniscreen not done



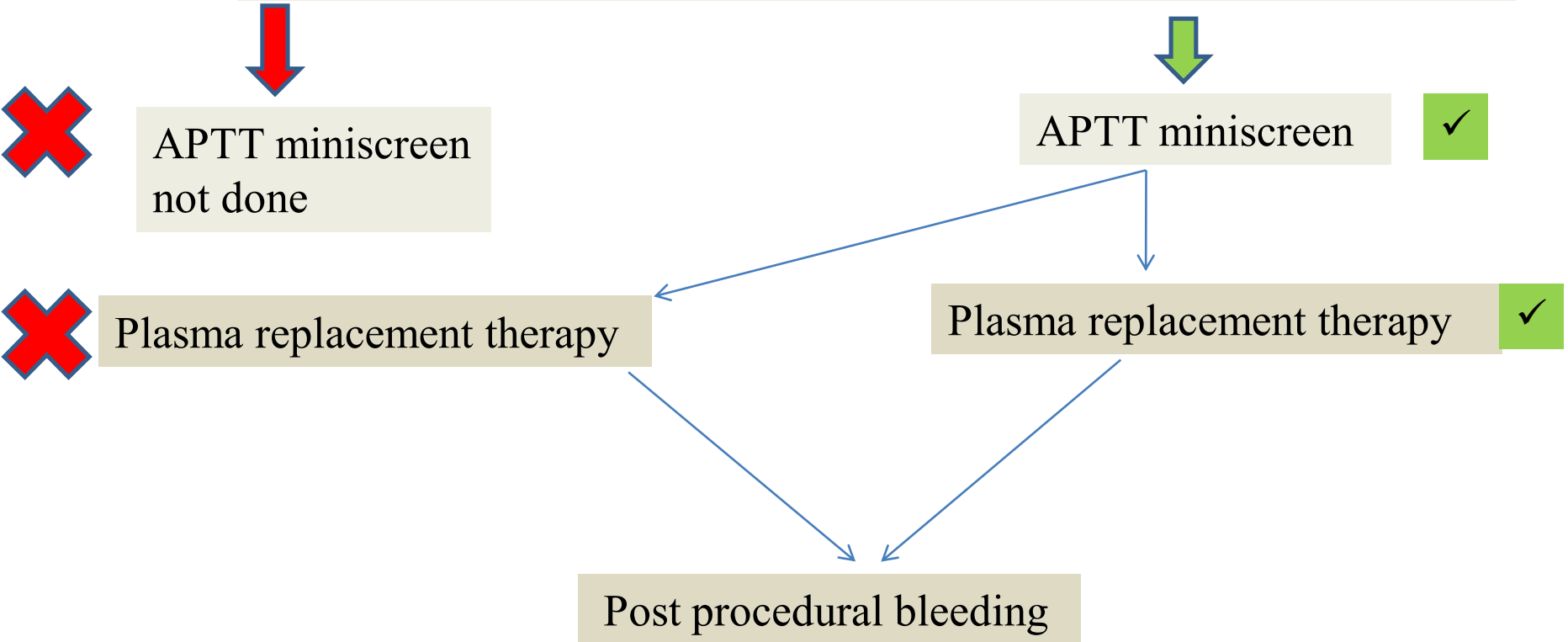
APTT miniscreen ✓



Plasma replacement therapy

Plasma replacement therapy ✓

Post procedural bleeding

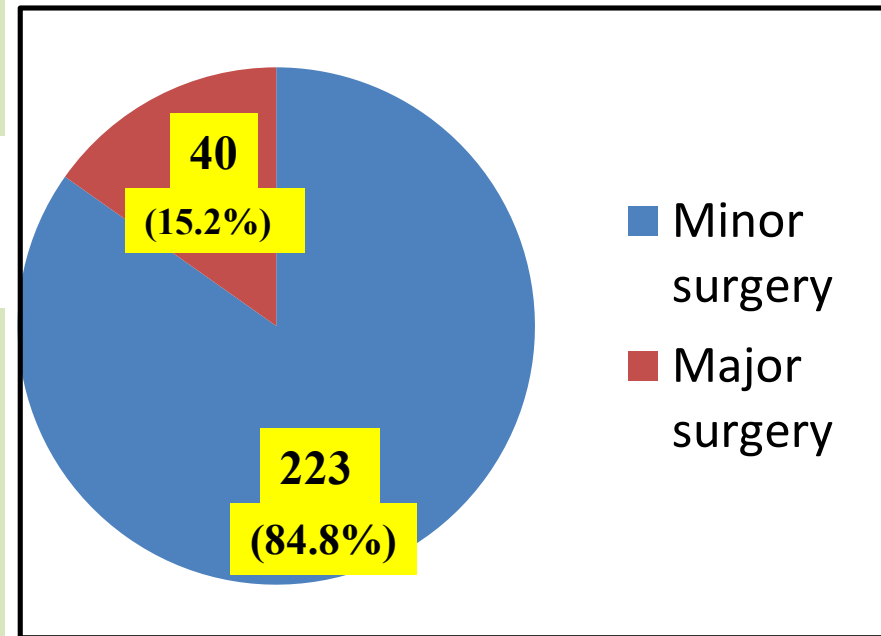


- Total **263** patients were identified who required consultation due to prolonged APTT and whose APTT mini screen study was performed.
- The median age of the cohort was **56** years old (**range 01 to 92 years old**).
- Male : Female – **3.2:1**
- Mean APTT was **56.17** (range, **42.6 -171.5**) seconds. (Normal :27.6-42.4 seconds)

.....Type of procedure

Minor surgery – Lymph node biopsy,
Central line insertion,
Incision and drainage
Soft tissue debridement etc.

Major surgery - Nephrectomy ,
Pulmonary lobectomy
Total hip replacement
Amputation
Intestinal resection and
anastamosis, etc



.....factor assay

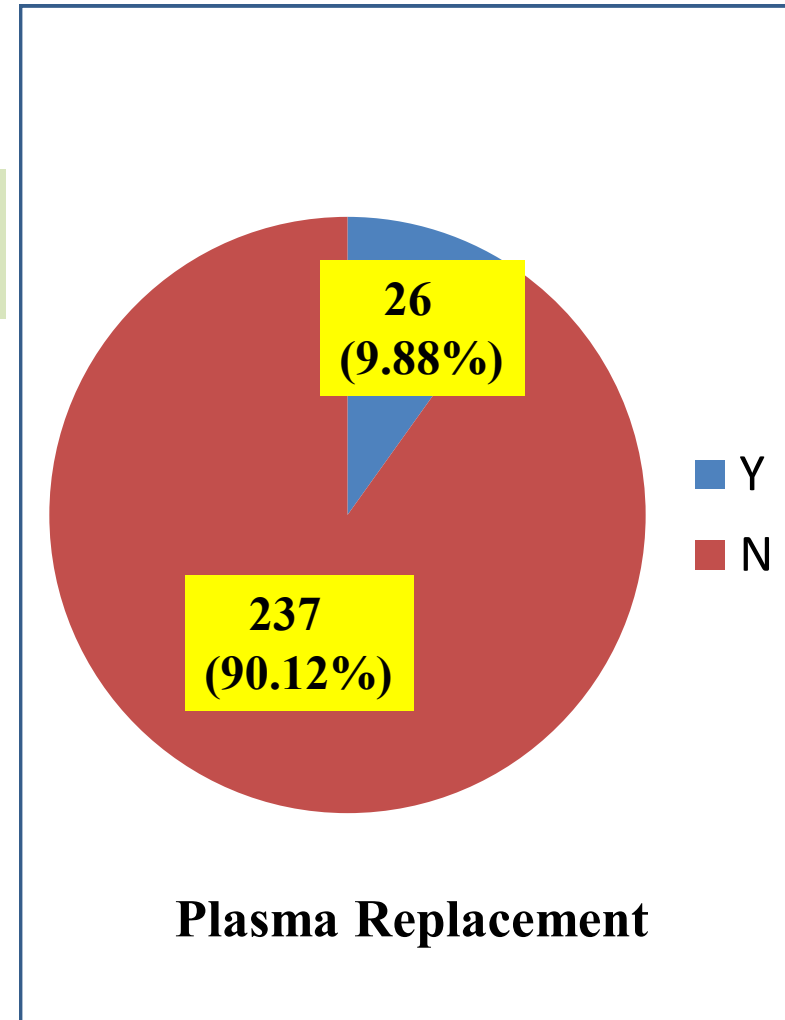
Prolonged APTT	No of patients (%)
Factor XII deficiency	202 (76.8%).
Factor VIII > 50%	52(95.8%).
Factor IX > 50%	246(93.5%).
Factor XI > 30%	251 (95.4%)
Factor XI > 40%	223 (86.69%)

All the factor above haemostatic level was identified in 165(62.7%) of patients

.....Plasma replacement therapy

- Plasma replacement therapy was not given in 237 (90.12%) of patients

- None of the patient had bleeding related to abnormal haemostasis in absence of plasma replacement.



.....Do not panic by value of APTT

APTT(sec)	No of patients (%)	No FFP
1-1.5 (42.4 – 63.6)	222	205 (92.3%)
1.5 -2.0 (63.6 – 84.8)	31	26 (83.8%)
2.0- 2.5 (84.9- 106)	6	4 (66.66%)
2.5-3.0 (106.1-127.2)	1	0 (0%)
3-3.5 (127.3-148.4)	2	1 (50%)
3.5-4.5 (148.5-190.8)	1	1 (100%)

.....Do not panic by value of APTT

APTT(sec)	XII def.	XI>40%	IX>50%	VIII>50%	Total
1-1.5 (42.4 – 63.6)	165(74.3%)	196(88.2%)	214(96.3)	215(96.8%)	222
1.5 -2.0 (63.6 – 84.8)	29(93.5%)	26(83.8%)	26((83.8)	29(93.54%)	31
2.0- 2.5 (84.9- 106)	5(83.3%)	4(66.6%)	4(66.6%)	6(100%)	6
2.5-3.0 (106.1-127.2)	0	1(100%)	1(100%)	1(100%)	1
3-3.5 (127.3-148.4)	2(100%)	1(50%)	1(50%)	1(50%)	2
3.5-4.5 (148.5-190.8)	1(100%)	1(100%)	1(100%)	1(100%)	1

.....cost effective

	Rate ₹
Blood group	420
FFP	400
Transfusion Charges	600
Total	1420

Cost of APTT miniscreen = ₹ 1945

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Cost of 4 units of FFP= ₹ 4420

.....*Conclusion*

Miniscreen minimizes transfusion

- APTT mini screen , in all isolated prolonged APTT, can considerably reduce unwarranted transfusion.
- *Ensure judicious use of what is otherwise a precious resource, Blood! .*

.....*Limitation*

- Pre analytical variables can not be ruled out due to retrospective study .
- Heparin contamination was not excluded as TT was not done.



Thank
You!