Individualization of prophylaxis in adults improves bleeding outcomes

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Background

Adult patients with Factor VIII <2% following standardized prophylaxis plans were continuing to bleed into their joints.

Objectives

Conduct a pilot study to determine if an individualized prophylaxis program:

- Decreased non-traumatic and traumatic joint bleeding rate
- Increased physical activity metrics
- Enhanced quality of life

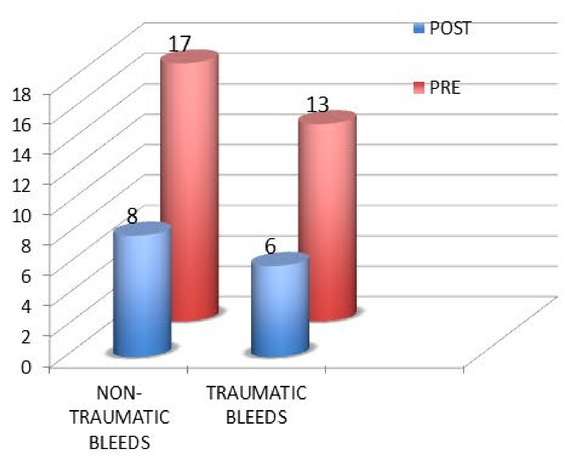
Materials and Methods

- Adults with hemophilia A (FVIII: C <2%) on a stable dose of standard prophylaxis for at least 4 months were approached.
- The prophylaxis regime was individualized by the treating physician, often by increasing frequency of factor administration to achieve higher trough activities. Weekly prophylaxis frequency increased from baseline median of 3x/wk to 6x/wk during pilot, corresponding to a decrease in baseline median infused dose from 21.2 to 11.4 u/kg/dose during pilot.
- Pre study data was compared 4 month study data: joint bleed rate, trough factor activity on prophylaxis, factor consumption, physical activity and physical functioning on QoL assessment (Haemo-Qol A).
- The regimens were monitored regularly by the hemophilia team trained in motivational interviewing technique to discuss additional adjustments

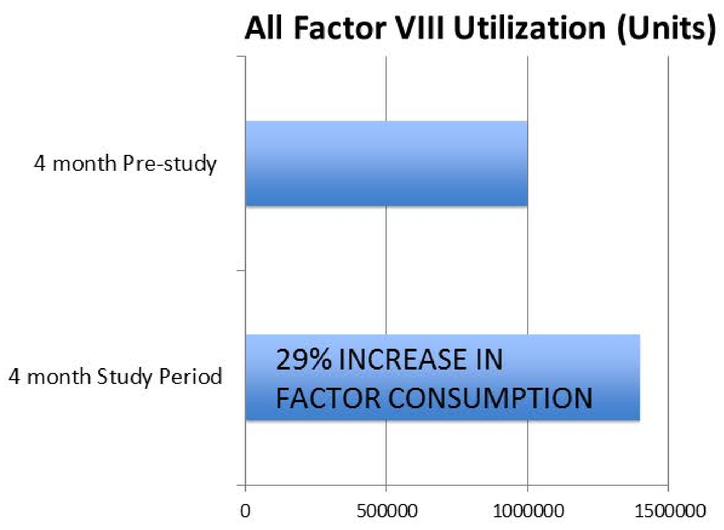
Results

- 12 consenting subjects with a median age of 25 years (range 20-47) with a median of 14 years (range 2-25 yrs) prophylaxis experience prior to the study. All subjects were adherent to the individualized regimen.
- Bleeding:
  - ✧ Cumulative joint bleeds decreased significantly from baseline during the 4 month study period (17 vs. 8; $p<0.05$)
  - ✧ 75% of patients experienced 0-1 joint bleeds during study period
  - ✧ 2/12 showed no change in joint bleeding rate
- Overall factor consumption increased by 29%. Factor utilization to treat bleeds decreased by 50%.
- 10% of subjects were classified active at baseline with similar energy expenditure 4 months post study when compared to baseline.

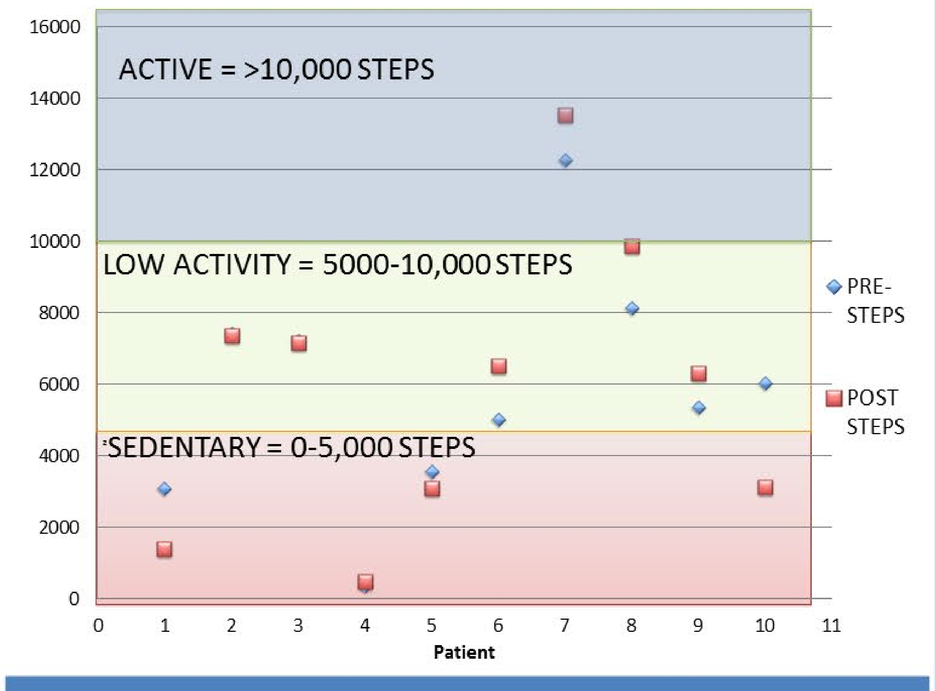
Pre & Post Study Joint Bleeds



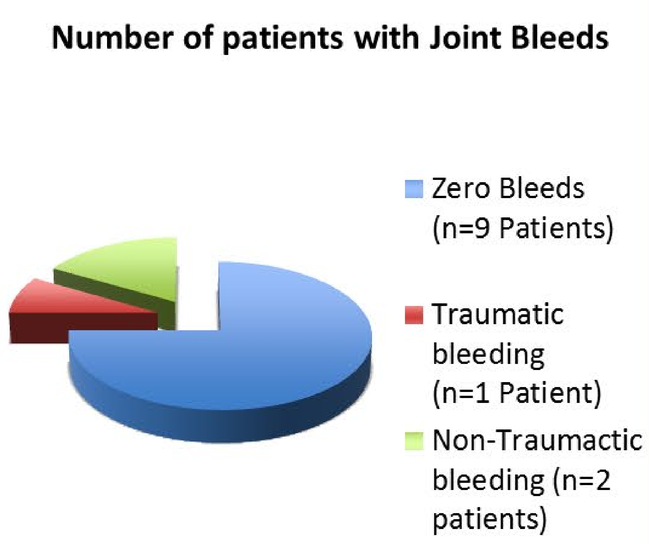
Pre Study & Study Factor Utilization



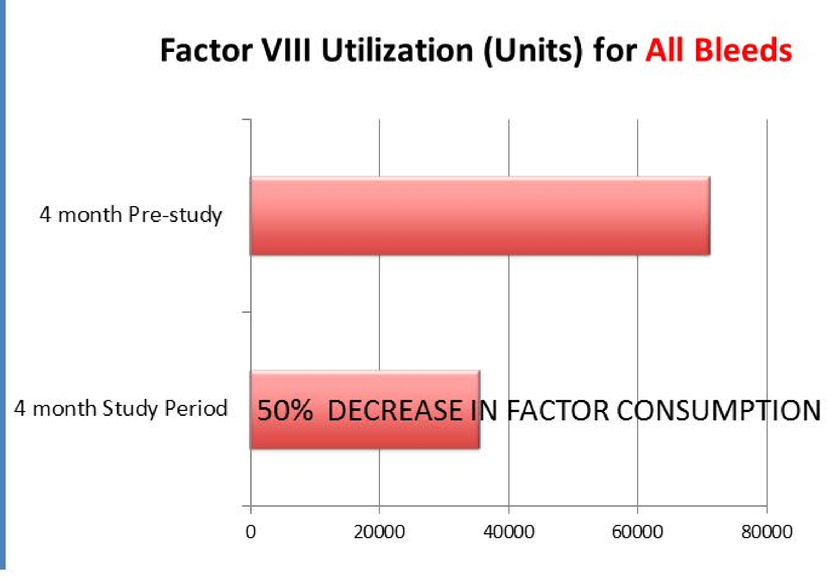
Activity: Steps per Day



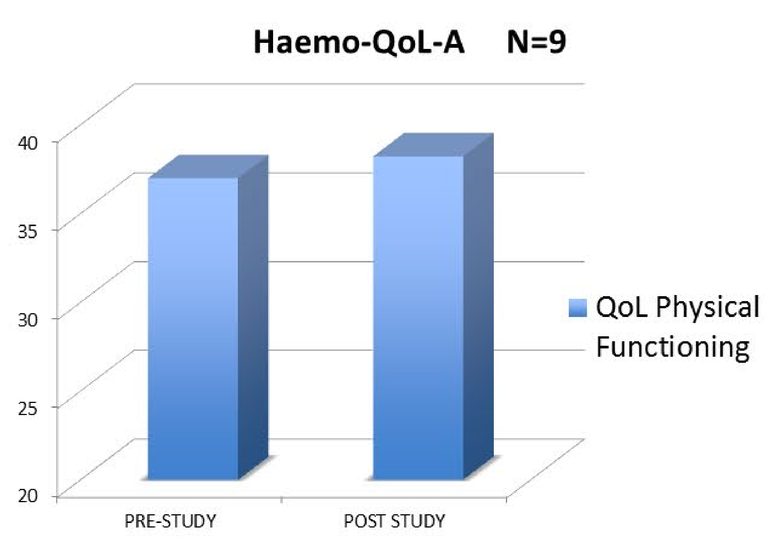
Joint Bleed Outcomes



Pre-study & Study Bleed Factor Utilization



Quality of Life (Physical functioning)



Conclusion: Individualized prophylaxis significantly improves joint bleeding outcomes with stable physical activity/ functioning, short-term decrease in factor use for bleeding, and increased overall factor consumption. 12 month follow up is planned.

WFH2014 57-P-W
Prophylaxis
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DOI: 10.3252/pso.eu.WFH2014.2014
Poster presented at: WFH 2014 World Congress