

Annual Bleeding vs. Factor VIII/IX consumption – comparison of result in 2014 and 2015 according to electronic diary smart medication™

R. Fischer, H. Eichler, K. Holstein, R. Klamroth, W. Mondorf, A. Nimt-Talaska, H. Richter, K. Severin, C. Wermes

Background:

Bleeding frequency and factor VIII/IX consumption (FC) differs widely among patients with the same coagulation defect. However, the individual year to year patterns are often similar. It was analyzed whether or not this is supported by the database of the electronic diary smart medication™.

Methods:

FC and Joint bleeds (JB) from 192 patients in 2014 were compared to 213 patients in 2015 from the same centers that completed electronic documentation smart medication™.

Results:

The average FC was 2,442 IU/kg BW ($\pm 2,038$ IU/kg BW) in 2014 and 2,701 IU/kg BW ($\pm 1,837$ IU/kg BW) in 2015. The average number of JB was 2.1 (± 3.9) in 2014 and 2.5 (± 4.9) in 2015 (Fig. 2). Four groups were identified and compared between 2014/2015 (Tab.1, Fig. 1): The majority (group A, 45%/40%) had 2 or less JB with less than average FC, followed by (B, 31%/35%) who also had 2 or less JB but above average FC. A minor group (C, 14%/11%) had more than 2 JB and more than average FC and was similar to a group (D, 10%/14%) who had more than 2 JB but less than average FC. Distribution of patients (Fig. 2) and Consumption of factor VIII/IX were similar comparing data from 2014 to 2015.

Conclusion:

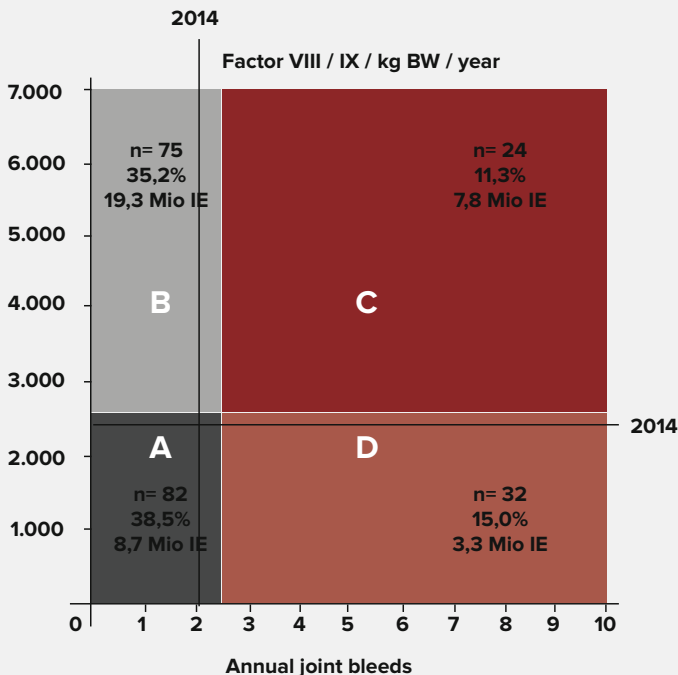
- A majority (76%/73%) of patients documented 2 or less JB per year as a result of optimal home treatment showing no major difference between two consecutive years.
- Patients with high bleeding frequency in spite of above average FC again revealed a small (14%/11%) but important group requiring intensified attention of target joints.
- The electronic diary smart medication™ is suitable to focus on groups of patient which may require more (group D) or less factor treatment (group B), or need otherwise intensified treatment (group C).
- A shift of resources from group B to group D may improve the overall outcome by reducing costs at the time.

TAB. 1

DIVISION INTO GROUPS ACCORDING TO FACTOR CONSUMPTION AND NUMBER OF BLEEDS

	Factor consumption	Number of bleeds	Possible measures
A	Below average	Below average	No change
B	Above average	Below average	Reduce factor consumption
C	Above average	Above average	Treatment of target joints
D	Below average	Above average	Increase factor consumption

FIG. 1
MEAN AS LIMIT FOR BLEEDS AND FACTOR CONSUMPTION



Groups A to D according to annual factor consumption in 2015 (colored fields) in comparison to 2014 (lines)

FIG. 2

ANNUAL FACTOR CONSUMPTION (IU/KG BW) AND BLEEDS 2015 AND 2014

	2015 N = 213	2014 N = 192
Annual factor consumption IU/kg BW	2701	2442
Annual bleeds	2,5 ($\pm 4,9$)	2,0 ($\pm 3,9$)

FIG. 3

NUMBER OF PATIENTS ACCORDING TO FACTOR CONSUMPTION VS. BLEEDING IN 2014 AND 2015

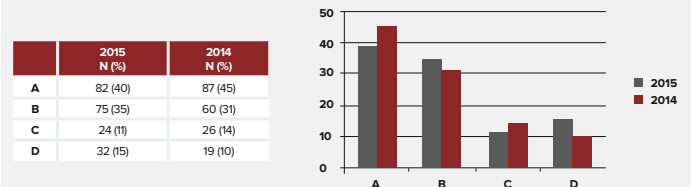


FIG. 4

FACTOR VIII/IX CONSUMPTION IN GROUPS A TO D IN 2014 AND 2015

