2/ Prophylaxis in children with hemophilia at the Sétif pediatric center: Strategy and clinical results

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• **Introduction:** Prophylaxis is the gold standard for the treatment of children with severe hemophilia. A new multifactorial therapeutic approach taking into account the child's age, hemorrhagic phenotype, level of physical activity and pharmacokinetic parameters suggests personalized prophylaxis to achieve **"zero bleeding" as possible.**

• **The objective** of our study is to describe our experience in optimizing prophylaxis and its clinical outcomes by the different international scores adopted.

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Material and methods: Our longitudinal and descriptive study of a series of 66 children with hemophilia followed in the pediatric department of Sétif during the period from 1 January 2016 to 31 December 2021.

Results:

Prophylactic treatment was initiated in all children: 70% were hemophiliacs A, 95% of them were severe forms. It is primary in 77.61% of cases. Personalized prophylaxis is adopted in 60% of hemophiliac A cases. The mean age of initiation of prophylaxis was 19.15 +/- 4 months. Primary prophylaxis was started before the age of 2 years in 67% of cases and in 19% after 2 years but before 3 years of age, for the 16% on secondary prophylaxis. 80% of children with hemophilia A were at the 2nd level (30%) and 3rd$_{level}$ (50%) respectively while 70% of hemophiliacs B were at the 2nd level.The factor used was plasma FVIII and recombinant in hemophiliacs A; on the other hand, all cases of hemophilia B received plasma factor IX with a factor VIII consumption of 2149450 IU/year and 483,000 IU/year for factor IX. Prophylaxis is carried out in 87% of cases at home, 20% self-inject and 75% receive prophylaxis either by the mother or by one of the family members. For the assessment, the annualized median rate of ABR bleeding was 2.01/patient/year with a hematoma rate of 0.76 hematomas/patient/year and 0.55 mucosal bleeds/patient/year, the annualized median rate of joint bleeding .**ABJR** was 0.70 hemarthroses/patient/year, no patient developed a target joint. An average HJSH score at 12.4, a mean pain-physician visual analogue scale (VAS) at 3.6, the mean FISH score at 22. An initial mean quality of life moderately impaired at (54.87%) and final at (35%) assessed by the HEMO QUAL questionnaire.

Conclusion: Our therapeutic strategy is based on primary prophylaxis but with the advantage of its personalization which allows better results and regimens adapted to each hemophiliac in addition to its impactful economic impact.