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"Prevalence and Clinical Profile of Factor VIII Inhibitors in Hemophilia A Patients in Western Algeria"

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ABSTRACT

Introduction : The development of inhibitors against factor VIII (FVIII) remains a major concern for clinicians treating hemophilia. This study presents a cross-sectional analysis of clinical data, treatment outcomes, and biological inhibitor detection among hemophilia patients in the western region of Algeria.

Materials and Methods: A total of 80 hemophilia patients, aged between 2 and 55 years, were included in the study. Among them, 62 (77.5%) had hemophilia A (HA), and 18 (22.5%) had hemophilia B (HB). The cohort consisted of 53 (66.5%) patients with severe hemophilia (FVIII or FIX <1%), 23 (28.75%) with moderate hemophilia (1–5%), and 4 (5%) with mild hemophilia. Treatment included on-demand therapy during bleeding episodes or prophylactic treatment in 16.5% of cases. Recombinant FVIII and FIX (22.9%) and Novoseven (2.5%) were the primary therapies used. Laboratory assessments included activated partial thromboplastin time (APTT), FVIII, deficient plasma, and Bethesda and Nijmegen assays for inhibitor detection. The study also screened for intron 22 inversion using PCR in selected cases.

Results: The overall prevalence of inhibitors was 19.3%, with 11/62 patients with hemophilia A (HA) presenting inhibitors (19%), and no inhibitors detected in patients with hemophilia B (HB). Among severe hemophilia A patients, 12% had high-titer inhibitors. Intron 22 inversion was identified in 3 of the 6 severe hemophilia A patients who developed inhibitors.

Conclusion : Despite identical mutations, not all patients develop inhibitors, suggesting additional factors are involved. The low prevalence of high-titer inhibitors in hemophilia A patients underscores the importance of other alternative treatments , which may have a significant public health impact.

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