

MUTATIONS IN THE FACTOR VIII GENE IN OUR HAEMOPHILIA A POPULATION

Martín López A, Joy Carmona P, Díaz Díaz CL, Ocaña Gómez MA, Ríos De Paz M, De Dios García MD, Esquivel Negrín J, González García I



Servicio de Farmacia Hospitalaria del HUNSC, SPAIN



26th Congress of the EHP (Vienna 2022)

BACKGROUND.

Haemophilia A (HA) is an hemostasis disorder with an incidence of 1:5000 male births and X-linked recessive inheritance. The genetic alteration determines the blood amount of FVIII, which will predict the severity: mild (between 5 and 40%), moderate (1 to 5%) and severe (<1%). Severe hemophilia is present in 60% of hemophiliacs. Intron 22 and intron 1 inversion represent the main molecular alterations in patients with severe HA (45-50% and 0.5-5%). The development of inhibitors is associated with the treatment and the genetic alteration. 20-30% of severe HA develop inhibitors. The mutations with highest incidence of inhibitors are large deletions, with a 42-74% prevalence.

OBJECTIVES.

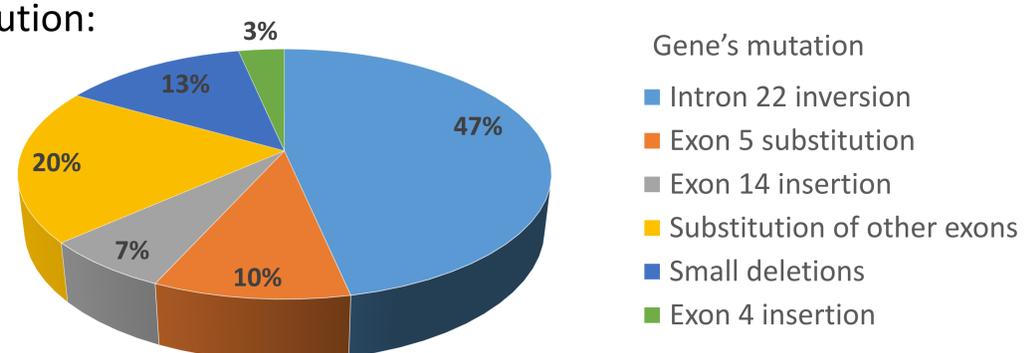
To describe the FVIII gene's mutation in the hemophilic population in Tenerife and to see the correlation between the genotype and the phenotype of the disease, as well as the influence on inhibitors development.

METHODS.

Observational, retrospective and descriptive study. It is checked the patient's clinical history, the mutations and the inhibitor's record.

RESULTS.

44 patients [1, 81 years] were analyzed, 21 severe (47.7%), 2 moderate-severe, 4 moderate and 17 mild. The diagnosis was confirmed by molecular biology (PCR) in 32 patients (severe and moderate) and we observed the following distribution:



7 patients (15.9%) developed alloantibodies: 1 still has them active and the rest have managed to erase them. In contrast to the studies performed, the mutations that prevail in the presence of the inhibitor are intron 22 inversions, with an incidence of 71.4%, rather than deletions, with an incidence of 28.6%.

CONCLUSIONS.

The data on the most prevalent molecular alteration in HA are consistent with those of our patients in Tenerife, since most of them present **inversion of intron 22**. However, the mutations associated with the development of inhibitors do not coincide with those described in the literature, since most of them are inversions of intron 22.

ACKNOWLEDGEMENTS.

The support of the entire department has allowed this work.

6ER-015