PATIENTS CLASSIFICATION WITH HEMOPHILIA A BY FVIII CHROMOGENIC ASSAY

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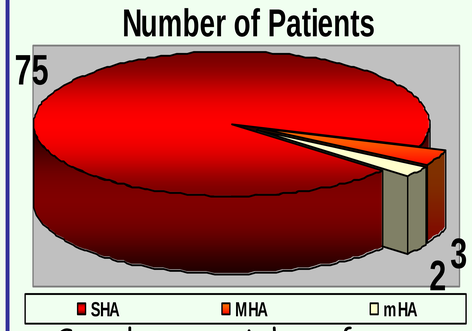
INTRODUCTION

Hemophilia A (HA) is a recessive X-linked disease characterized by deficiency in FVIII
The severity of the bleeding phenotype is associated with the residual activity of the deficient factor, Severe HA (SHA) less 1%, moderate HA (MHA) 1-5%, mild HA (mHA) more than 5%. Different methodologies can be used to measure FVIII, such as one stage clotting assay, two stage clotting assay or chromogenic assay.

OBJETIVE

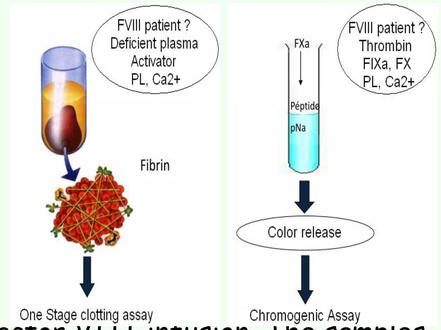
Compare baseline level of factor VIII both with one stage assay and FVIII chromogenic assay in Haemophilia patients

METHODS



80 patients with Hemophilia A, average age 41 (range 12-71) were studied.
Automatic coagulometer ACL TOP 300 IL (Instrumentation Laboratory) was used.

FVIII assay was performed by coagulometric (IL) and chromogenic (CHROMOGENIX) methods.



Samples were taken of every patient with a wash-out period of 4 days since last factor VIII infusion. The samples was processed with one stage assay (Factor VIII deficient plasma with low levels of VW Factor) within 1 hour of extraction, while the chromogenic assay method was performed in samples preserved in a freezer at -80°C.

RESULTS

VIII coag	VIII chr	Initial Classification	VIII chr / VIII coag	New Classification
2	0,8	HAS	0,39	HAS
8	2	HAL	0,25	**HAM**
0,3	0,8	HAS	2,67	HAS
1,6	0,2	HAS	0,13	HAS
2	0 (<detection limit)	HAS	0,00	HAS
1,4	0,4	HAS	0,29	HAS
2	0,8	HAM/O+	0,40	**HAS**
2	0,6	HAM/O+	0,30	**HAS**
0,3	0,79	HAS	2,63	HAS
1,1	0 (<detection limit)	HAS	0,00	HAS
2	0 (<detection limit)	HAS	0,00	HAS
0,4	0,1	HAS	0,25	HAS
2	0,9	HAS	0,45	HAS
2,2	0,6	HAS	0,27	HAS
0,2	0,7	HAS	3,50	HAS
1,4	0 (<detection limit)	HAS	0,00	HAS
1,1	0,3	HAS	0,27	HAS
2,2	0,8	HAM	0,36	**HAS**

80 patients were initially categorized based on the baseline FVIII level by coagulometric method; however, by the availability of FVIII chromogenic method in the institution, a revision was made to establish correlation of both methods

Of 80 patients, 18 (22,5 %) showed discrepancies when analyzing the relationship VIIIchr/VIIIcoag (<0.5 - >2.0).

4 patients were recategorized: 1 from mHA to MHA, 3 from MHA to SHA, these findings correlated with clinical phenotype (greater number of bleeding events, joint commitment).

CONCLUSIONS

It is important that FVIII chromogenic assay can be used routinely in hemophilia treatment centers. This methodology is more specific and sensitive, though more expensive, but correlates better with clinical phenotype. Ensuring correct diagnosis is critical for adequate treatment, preventing bleedings and subsequent joint damage.
The discrepancy between both methods could be related to certain Factor VIII mutations, as described in literature.

REFERENCES

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