

## FRONTAL HAIR WHORL.

1st case: In a 5-month-old male baby with peripheral neurofibromatosis type I (NFI), likely due to a fresh mutation, the physical examination did not show significant abnormalities except for the lack of posterior parietal hair whorls. On the other hand, a counterclockwise hair whorl was evident on the median line 5 centimeters behind the frontal hair line (Fig. 1). His family history was negative for frontal hair whorl. The final diagnosis was **frontal hair whorl in a subject with NFI**.

2nd case: A 6-year-old boy, first-born, suffered from dominant dystrophic epidermolysis bullosa (EB) as well as his mother, confirmed by immunofluorescence and electron microscopy studies. Since birth the child, instead of the normal posterior parietal hair whorl, had a frontal counterclockwise hair whorl (Fig. 2). The latter was responsible for significant esthetical and psychological problems and remained unchanged with time. The final diagnosis was **frontal hair whorl in a subject with dominant dystrophic EB**.

Trichoglyphics, namely the direction put on by the hair, as well as dermatoglyphics are influenced by genetic and environmental factors acting between the 10th and 17th week of fetal life. Most subjects with smooth hair present a hair whorl in the parietal region, in front of the posterior fontanelle, on the median line or laterally on the right or, less frequently, on the left. In the hair whorl the hair usually rotate clockwise in most cases, but counterclockwise in 11.1% of cases. The latter rotation is more frequent in left-handed subjects (1).

A minority of subjects presents a **frontal hair whorl** (2). The latter, although possibly present in normal subjects, is more frequent in some inherited skin disorders (3).

This is why a frontal hair whorl may be an additional sign to confirm the suspicion of inherited disorders, particularly those associated with mental retardation.



Fig. 1

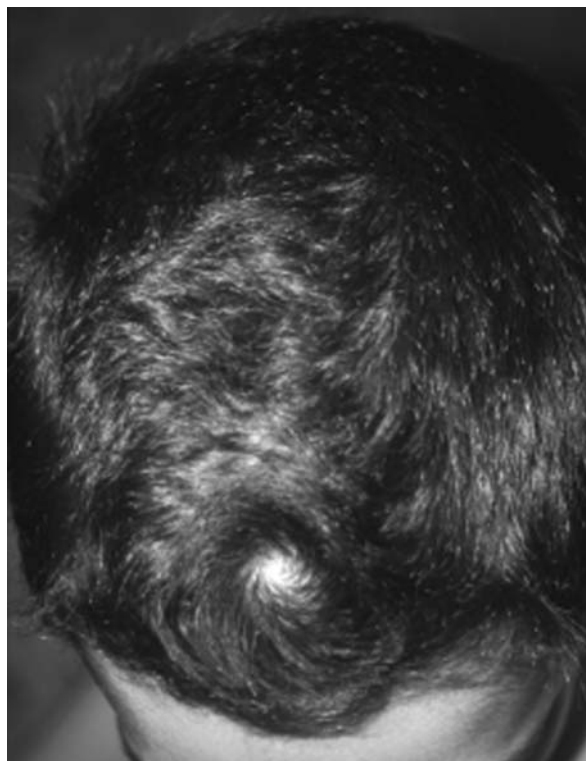


Fig. 2

### References

- 1) Klar J.S. - Human handedness and scalp hair-whorl direction develop from a common genetic mechanism. *Genetics* 165, 269-76, 2003.
- 2) Smith D.W., Gong B.T. - Scalp-hair patterning: its origin and significance relative to early brain and upper facial development. *Teratology* 9, 17-34, 1974.
- 3) Thompson E.M., Baraitser M., Lindenbaum R.H., Zaidi Z.H., Kroll J.S. - The FG syndrome: 7 new cases. *Clin. Genet.* 27, 582-94, 1985.