

HAIR LANGUAGE

The terms "tricho" and "pili" mean hair in medical language and are usually used in descriptions of hair disorders. Other frequently used terms are "anagen" and "telogen". Anagen refers to the growing phase of the hair and telogen to the shedding phase. When we examine plucked hair under the microscope, we can tell by the appearance of the root whether the hair is in the growing or the resting phase. This information is very important in diagnosing certain hair disorders, especially those that involve active hair loss.

Inherited disorders are often associated with structural abnormalities of the hair shafts. These defects have specific names that are mainly descriptive and do not necessarily shed any light on the cause of the hair shaft defect. Some of these defects represent fractures in the shaft, some coiling and twisting of the hair shaft and others irregularities (for example, beading) of the shaft or the presence of extraneous matter. As certain diseases may be associated with a particular hair shaft defect, finding that defect by examining the hair under the microscope may help in making the correct diagnosis. Other hair shaft changes are non-specific. Nevertheless, hair examination is a simple, inexpensive test that is sometimes very useful.

Some of the more frequently used terms for hair shaft defects are as follows:

- 1 Trichoschisis - a clean transverse fracture across the hair shaft associated with localized absence of the cuticle (outside layer).
- 2 Trichorrhexis nodosa - a nodular swelling due to fraying of the hair shaft fibers. The node looks like interlocking brushes under the microscope. This abnormality can be caused by damage to normal hair but is also seen in association with conditions that cause brittle hair.
- 3 Trichorrhexis invaginata - a nodular fracture of the hair shaft in which a ball and socket joint is formed. Multiple swellings are seen along the hair shaft under the microscope. This defect is characteristic of Netherton's syndrome which also has ichthyosis as a feature.
- 4 Monilethrix - beaded hair due to narrowing of the hair at intervals along the shaft. This occurs in families. Affected people do not have any other skin, nail or teeth problems.
- 5 Pili Torti – corkscrew or twisted hair. The hair shaft is flattened and twisted around itself 180 degrees. This type of defect is seen in several genetic disorders.
- 6 Pili annulati - ringed hair. This type of hair appears shiny and has alternating bright and dark bands under the microscope due to pockets of air within the hair shaft. This hair grows normally and does not break easily.

Hair shaft changes due to wear and tear are very common, particularly in hair that has been manipulated by excessive styling, bleaching or drying or that has been weathered by prolonged exposure to the sun, wind and water (swimming). Most of these changes occur near the ends of the hair shaft (e.g. "split ends") and represent damage to the hair rather than a genetic hair anomaly.

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