Read Item - Telogen Effluvium

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Date: 05/05/2000
Publisher/Journal:
Keywords: hair loss, telogen effluvium, telogen gravidarum

Abstract: A discusssion on Acute and Chronic Telogen Effluvium, Telogen Gravidarum

Definition

Telogen effluvium is a self limiting, non-scarring, diffuse hair loss from the scalp that usually occurs 3 to 6 months following an severe illness or other similar trigger. It usually but not always resolves over 3 to 6 months with restoration of the hair to its normal state. Telogen gravidarum is the name given to a telogen effluvium that follows childbirth.
Chronic telogen effluvium is much less common. This chronic diffuse alopecia is said to occur when the increased hair sheding persists beyond 6 months.

Epidemiology

Telogen effluvium is one of the most common causes of diffuse hair loss, however many patient s do not seek medical attention, which makes the precise incidence difficult to establish. It is estimated that telogen gravidarum affects a third to a half of all women following childbirth. Again many more cases are subclinical.
Chronic telogen effluvium virtually only occurs in women for reasons that are not entirely clear.

Aetiology

A wide variety of triggers have been implicated for acute telogen effluvium. Severe febrile illness, pregnancy (as per telogn gravidarum), chronic systemic illness, a change in medication, a large haemorrhage, a crash diet or sudden starvation, accidental trauma, surgical operations or severe emotional stress are the most common.
While chronic telogen effluvium may be triggered by an acute telogen effluvium, more commonly no trigger is evident.

Pathogenesis

The physiological daily shedding of a few telogen club hairs from the scalp is a natural consequence of the hair cycle. Follicles normally retain telogen hairs until they have re-entered anagen. Eventually the new anagen hair pushes the old telogen hair out. This shedding does not produce alopecia and does not alter the trichogram.
Telogen effluvium occurs if a significant number of anagen hairs are triggered to prematurely stop growing and enter catagen and then telogen. Excessive hair shedding occurs place some 2-3 months after the initial event. A temporary alopecia develops as the long club hairs are replaced by short, cosmetically insignificant, new anagen hairs. Provided the insult is not repeated, the alopecia resolves as the new anagen hairs grow.
Telogen gravidarum is the name given to a telogen effluvium that follows childbirth. It occurs because the high circulating placental oestrogens prolong anagen and lead to a very full head of hair during pregnancy. The withdrawal of these trophic hormones at delivery causes all the overdue anagen hairs to simultaneously enter catagen. Telogen hairs are then shed a few months later.
The cause of this chronic telogen effluvium is uncertain, but may be due to shortening of the anagen phase of the cycle. It has been suggested that shedding is not noticeable until anagen is reduced by 50%, however formal studies are not available.

Clinical features

Approximately two to three months after the triggering event there is a period of dramatic hair loss. It is lost diffusely from the scalp and continues for a few weeks to months
The diffuse hair fall may produce marked thinning of the scalp hair. Patients often do not relate these events to their recent illness and become concerned they are going to go bald.
The hair pull test is strongly positive with clumps of telogen hairs being extracted with ease from both the vertex and the margins of the scalp.
The presentation of chronic telogen effluvium tends to be distinctive. Affected women are

between 30 and 50 and have a very full, thick head of hair. Frequently there is a history of being able to grow their hair very long in childhood, suggesting a particularly long anagen phase. They complain of an abrupt onset of hair shedding often sufficient to block the drain after a shower with thinning of their hair.
On examination there is prominent bitemporal recession and a have a positive hair pull test equally over the vertex and occiput, but it is difficult to be convinced of any hair thinning. There is no widenening of the central part as is common in androgenetic alopecia. Nevertheless, the patient is adamant that they previously had more hair and are distressed by the prospect of going bald. Usually there is no family history of early onset androgenetic alopecia and scalp biopsy shows only minimal changes.

Investigation
A full blood count, serum ferritin and thryroid function tests should be performed in all cases to exclude other causes of diffuse hair loss. Syphilis serology, antinuclear antibodies and a serum zinc should be performed if there are other features on history or examination to suggest these conditions. A drug history should be taken and in particular a change in the oral contraceptive pill three months earliershould be enquired about as this is a relatively common cause of a short lived telogen effluvium and is easily overlooked.
A scalp biopsy is usually required in cases of chronic telogen effluvium, mainly to exclude androgenetic alopecia.

Diagnosis
Diagnostic difficulty occurs when the insult is prolonged or regularly repeated. Chronic telogen effluvium can be difficult to distinguish from early androgenetic alopecia, especially as periods of progression in androgenetic alopecia are preceded by increased shedding of telogen hairs. Chronic diffuse alopecia areata (AA) is very rare (page 6.2). Acute forms are generally seen in rapidly evolving alopecia totalis and exclamation mark hairs are usually present. In the absence of exclamation mark hairs the diagnosis of diffuse AA cannot be made clinically and a biopsy is required.

Associated Conditions
Beaus lines of the nails may co-exist on occasion. More usually there are none, unless manifestations of the triggering event persist.

Pathology
In acute telogen effluvium, the trichogram is abnormal with greater than 25% telogen hairs and this can be useful in difficult cases to distinguish telogen effluvium from early androgenetic alopecia. A biopsy is rarely required in acute cases, although it will provide reassuring prognostic information in a patient who is particularly anxious.
The histology of acute telogen effluvium shows an increased number of telogen hairs without inflammation.
The histology closely resembles normal scalp. In particular there is no follicular miniaturisation, no loss of terminal hairs and no increase in the vellus hair count. There may be a mild increase of telogen hairs, but less marked than in acute telogen effluvium or androgenetic alopecia. Trichograms from the occiput and the crown show similar slight increases in the telogen count. In contrast the trichogram in early androgenetic alopecia should show an increase I telogen hairs on the vertex, but not on the occiput.

Prognosis
Acute telogen effluvium and telogen gravidarum are self limiting over 3 to 6 months. Most women get full restoration of their hair, while the hair in a small proportion of cases remains thin, possibly due to unmasking of underlying androgenetic alopecia. Such cases may benefit from a biopsy to further delineate the prognosis.
I has been suggested that following telogen gravidarum, some hairs may not revert to the asynchrony in hair growth normally seen over the human scalp and cause generalised or regional episodic hair loss in the future.
The prognosis for women with chronic telogen effluvium is less certain, but it appears the hair shedding follows a fluctuating course, that they do not go bald and the condition usually resolves spontaneosly after 3 to 4 years.

Treatment
Mere reassurance that they are not going bald, that the telogen effluvium is temporary and that the hair will regrow is sufficient. Some patients require from a wig while awaiting regrowth. Empirically topical minoxidil may hasten resolution by prolonging anagen and stimulating telogen hairs to reenter anagen, however evidence for this is lacking.

Key Points
Telogen effluvium is an acquired, self-limiting, reversible, non-scarring, diffuse alopecia due to excess shedding of telogen hairs. A precipitating event can usually, but not always be identified.

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