Pattern and differentiation of hair loss in Diyala governorate

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Abstract

Aim of study: To determine the pattern and demographic factors of hair loss in Diyala governorate.

Patients and methods: This cross-sectional study included analysis of the reported cases of hair loss. Data of current study were collected for the period from 10/10/2023 to 5/3/2024. We collected 200 patients with hair loss who attended the

dermatology clinic in Baquba teaching hospital. The diagnosis of cases achieved by physicians' works in these health associations. We collected information about age, gender, residency, occupation and diet and type of hair loss using prepared written questionnaire.

Results: 200 patients were enrolled in this study, 10% were males and 90% were females. Their mean age was 25.16 years. Telogen effluvium was present in 60% of the cases. 52.5% of them have family history of hair loss and 47.5% don't, 48.5% of them are taking good care of their hair and 51.5% are not taking care of their hair. No chronic disease were found and only 7% of them suffered from thyroid abnormalities

Conclusion: The most common type of alopecia in our study was telogen effluvium which is very common among the females more than males. Social stress, diet and hair and skin care proved to be important influencing factors.

Chapter one

Introduction and aims

Introduction

The clinical disorder known as alopecia, or hair loss, is commonly observed in dermatology clinics. There are numerous etiological causes that can contribute to hair loss, and it has a substantial impact on the patients' quality of life. The two subdivisions of this group of illnesses are cicatricial alopecias and non-cicatricial alopecias. Although cicatricial alopecia can lead to the irreversible loss of hair follicles, in non-cicatricial cases this disorder is typically curable. Non-cicatricial alopecia is known to have a variety of causes, such as emotional problems, long-term illnesses, inadequate food, missing trace elements, and vitamin deficiencies.

Additional causes may include immune system dysfunction, substance abuse, stress, endocrine abnormalities, and alterations in genes and epigenetics (1).

Alopecia, which is defined as the partial or whole loss of hair, can be brought on by an imbalance in the cycle that produces new hair or by local or systemic factors such infection, hormone abnormalities, and heredity that destroy hair follicles. The four stages of the hair growth cycle are as follows: the anagen phase, which lasts for two to seven years and is the longest; the catagen phase, which is the transitional phase that lasts for two weeks and includes the involution of hair follicles due to apoptosis; the telogen phase, which lasts for up to twelve weeks; and the exogenous phase, which is the phase in which telogen hair is released (2).

There are numerous varieties of alopecia due to the fact that it is influenced by a multitude of circumstances. Among the most prevalent types are trichotillomania, androgenic alopecia, alopecia areata, alopecia produced by chemotherapy, anagen effluvium, and telogen effluvium. All forms of alopecia are classified into two categories by Rook and Dawber's clinical classification system: two types of alopecia: cicatricial and non-cicatricial (3).

The impacted stage determines the differences in hair loss. While there are many various causes of hair loss, the main culprits are typically androgen and stress-related issues. Telogen effluvium, nutrition, hormone imbalances, medications, infections, specific disorders, cancers, immune system issues, aging, and hereditary factors are additional systemic reasons of hair loss. Drug-induced alopecia is a form of non-scarring alopecia affecting the scalp that happens when either of the two primary mechanisms—anagen effluvium or telogen effluvium—of the normal hair growth cycle is disrupted. The hair loss gets better when the medication is stopped.

Drugs rarely impact other body hairs. Among the medications that induce hair loss include antihypertensives, antiarrhythmics, statins, antimetabolites, psychiatric medicines, anti-convulsant, anticoagulants, antiretrovirals, and H2 blockers (4).

Figure 1 Telogen effluvium

Figure 2 androgenic alopecia

Alopecia areata is a global condition. The lifetime risk is roughly 2 percent, and the estimated prevalence is 1 in 1000 persons. Alopecia areata can affect both adults and children, and it affects men and women equally in terms of frequency. According to a study conducted on clinical data gathered from Olmsted County, Minnesota residents between 1990 and 2009, the average age at which alopecia areata is diagnosed is 36 years for females and 32 years for males (5). It's uncertain if alopecia areata flare-ups follow a seasonal trend. Alopecia areata in children may flare up more frequently in the winter, according to a retrospective research involving about 450 children (6).

Aim of study

To determine the pattern and demographic factors of hair loss in Diyala governorate.

Chapter two

Patients and methods

Patients and methods

This cross-sectional study included analysis of the reported cases of hair loss. Data of current study were collected for the period from 10/10/2023 to 5/3/2024.

We collected 200 patients with hair loss who attended the dermatology clinic in Baquba teaching hospital. The diagnosis of cases achieved by physicians' works in these health associations. The privacy of the patients was preserved by coding their data into number to prevent bias. We collected information about age, gender, residency, occupation and diet and type of hair loss using prepared written questionnaire.

The data analysis was done by Statistical Package for Social Sciences (SPSS) version 26. We expressed the qualitative data by frequencies and the quantitative data such as weight and length by arithmetic mean.

Chapter three

Results and discussion

Results

200 patients were enrolled in this study, table 1 shows the gender percentage. Their mean age was 25.16 years.

Table 1 Gender

Gender	Frequency	Percent
Male	20	10.0
Female	180	90.0
Total	200	100.0

As shown by table 1, the males were 10% of the sample and the females were 90% of the sample.

The pattern of hair loss is demonstrated in table 2.

Table 2 pattern of hair loss

Pattern	Frequency	Percent
Breaking of hair	26	13.0
Falling with the roots	144	72.0
Both	30	15.0
Total	200	100.0

As shown in table 2, the pattern of hair loss was mainly by falling by roots (72%) and breaking of hair (13%) and 15% suffered both of them.

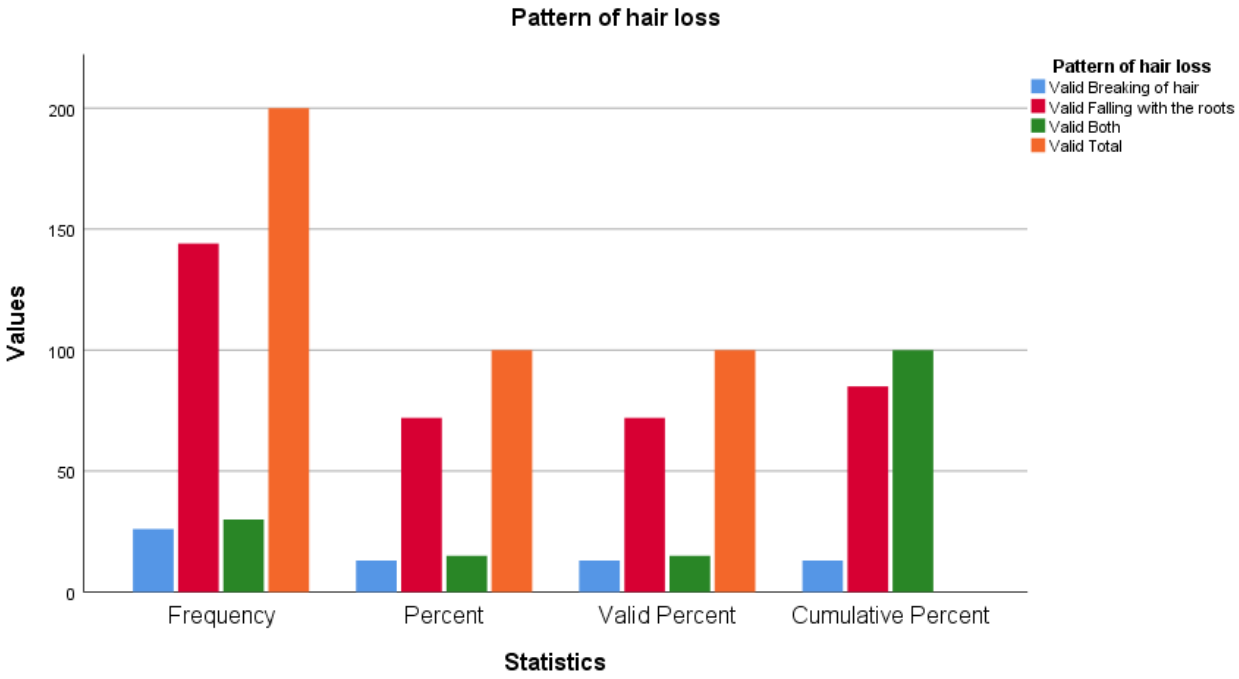

Figure 3 pattern of hair loss

69% of them lost their hair by shading and 31% by thinning of hair follicles.

Their personal issues are demonstrated in table 3.

Table 3 personal issues and factors

Issue	Frequency	Percent
Psychological condition (stress, emotional problems, etc)	184	92.0
Menstruation	4	2.0
Pregnancy	8	4.0
After labour	4	2.0
Total	200	100.0

As demonstrated in table 3, 92% of the patients have psychological conditions such as emotional problems and other conditions, 4% were pregnant, 2% had problem in menstruation and 2% were in the puerperium period.

The type of alopecia is demonstrated in table 4.

Table 4 type of alopecia

Types	Frequency	Percent
Telogen effluvium	120	60.0
Androgenic alopecia	80	40.0
Total	200	100.0

Table 4 shows that the majority of the cases suffered from telogen effluvium type of hair loss (60%) and 40% suffered from androgenic alopecia.

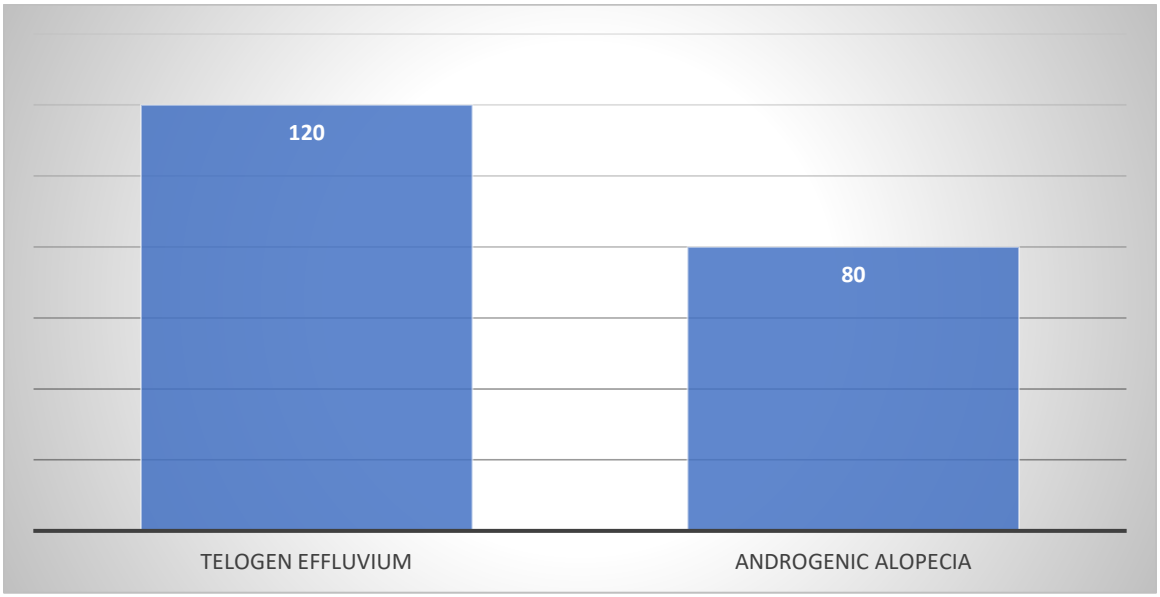

Figure 4 type of alopecia frequencies

Their food diet is demonstrated in table 5.

Table 5 Diet types

Diet	Frequency	Percent
Traditional food	185	92.5
healthy food	13	6.5
Vegan	2	1.0
Total	200	100.0

As shown in table 5, 92.5% of them eat traditional food and only 6.5% of them eat healthy food. 52.5% of them have family history of hair loss and 47.5% don't, 48.5% of them are taking good care of their hair and 51.5% are not taking care of their hair. No chronic disease were found and only 7% of them suffered from thyroid abnormalities.

Discussion

In our study, there were 200 patients with various clinical forms of Alopecia Areata; 10% of the patients were men and 90% of the patients were women of various ages. Alopecia areata is a non-scarring, autoimmune, heterogeneous disorder characterized by hair loss; it can also affect the entire body (alopecia universalis) or just the scalp (alopecia totalis). The illness progresses in an unpredictable manner, with abrupt relapses occurring at any time (7).

Psychological history results showed a considerable correlation between stress and alopecia. A study conducted in Brazil found that women's complaints of hair loss were frequently linked to high levels of stress (92%) (8).

The causes of telogen effluvium (TE) hair loss are complex and include diet, medicine, fever, abrupt weight loss, and more. In this study, women with TE had a considerably higher positive family history of hair loss. This is consistent with the findings of the França et al study, which suggested that TE hair loss may be influenced by family history (9).

Women with TE did not exhibit a statistically significant difference in their thyroid stimulating hormone levels from normal levels. This conclusion was consistent with the findings of the Moeinvaziri et al investigation (10). This contradicted the findings of the Vincent et al study, which indicated that TSH is crucial for determining a woman's degree of hair loss (11).

Patients with alopecia require counseling, much like those with other social and psychological disorders, in order to cope with their circumstances. Because those who experience poor self-esteem are unable to accept their condition, it might even result in deadly suicide cases. Counseling is essential, particularly for adolescents and young women who believe their illness would negatively impact

their acceptance in relationships and sexuality. Lemieux et al. conducted a study to examine the psychological effects of chemotherapy-induced hair loss in cancer patients. The study found that patients who experienced hair loss experienced stress, low self-esteem, and negative body image in comparison to those who did not get chemotherapy (12).

Conclusion and recommendations

The most common type of alopecia in our study was telogen effluvium which is very common among the females more than males. Social stress, diet and hair and skin care proved to be important influencing factors. We recommend conducting more studies on this topic to and to perform educational campaigns about hair loss, its causes and the possible preventive methods.