

Current Scenario of Hair Loss as A Disease or A Problem: Causes, Factors and Its Therapies

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Abstract:

Loss of hair is a collective problematic in both males and females which are also known as baldness or alopecia and are characterized by loosing hair commencing portion of the body or head. It generally psychological suffering that occurs when some people encountered hair loss, and most head is involved in baldness. The correct diagnose of hair loss disorder is multifaceted and involves estimation of scientific presentation, physical inspection, laboratory test, and account. Loss of hair may be characterized as hair shaft irregularities, perpetual alopecia or non-permanent alopecia. The general type is non-permanent alopecia include alopecia areata, androgenetic alopecia, traction alopecia, and telogen effluvium. Hair loss is classified into two which include male pattern hairlessness and female pattern hairlessness. Hence female array is less common in comparison to male pattern baldness. Various causes of baldness may include hormones, medical history, genetic history, stressful events, and many other things. In

conclusion, we have observed that hair loss disorder is most common in males rather than females.

Keywords: Baldness, Alopecia, Hair loss, Stress

1. Introduction:

Different ages of different sex have been affected by hair loss (alopecia). Frequently head is involved in psychological distress is occurred in some people during hair loss, most common varieties of alopecia are given below [1].

(a) Male or female pattern baldness; this one occurred from the scalp which is permanent hair loss, initiating baldness.

(b) Alopecia areata: this one is kind of sudden hair loss also called in abbreviated form AA that twitches with one or further rounded bald coverings which may overlay.

(c) Telogen effluvium: this one occurs after a stressful experience which is a reversible condition of hair loss.

(d) Anagen effluvium: An irregular loss of hair in which it occurred during the first phase (anagen) of the hair progression cycle [2].

1.1 Pattern of hair loss in male:

The male kind of hair loss is a perpetual hair loss from the scalp which is called as male pattern hair loss or androgenic alopecia (Figure 1), causing baldness. The combination of genetics and hormones is the reason for the cause of male pattern hair, androgenic alopecia affects the 50% of the men and only 10% in female [3]. The investigation has brought into being that male pattern hairlessness is connected with male sex hormones named androgens. Hence androgens take responsibility for numerous functions counting growth regulation of hair [4,5].

Professionals mostly use the configuration of hair loss to diagnose male pattern hairlessness. Also, carry out a therapeutic account and test to regulate out certain health situations as the cause; for example, include scalp fungal condition or maturational disorders. Male hair loss can initiate in early age in young, but it more regularly occur in the age of an adult, meanwhile the possibility of growing with age. Genetics also play a giant part [6], those people or males who have adjacent relations with male outline baldness are at a complex risk. This is predominantly right when their blood relatives are on the maternal side of the family [7].



Figure 1: Male Baldness.

1.2 Pattern of hair loss in female:

This kind of hair loss is a womanly hair loss pattern which is also permanent hair loss begins from the scalp which causes baldness. The main cause of female pattern hair loss is indistinguishable, autoimmune are the reason for alopecia areata (AA), and then the reason for telogen effluvium is naturally or mentally or emotionally stressful event. Androgenetic alopecia is also called as female pattern hair loss (FPHL), which is the type of hair loss that touches females [8], which is similar to male pattern baldness even though female baldness pattern is different from that of men because females might lose their hair in a dissimilar pattern, unlike men. This type of disorder in women is usual, particularly as they age more. There are two-thirds of women may get the hair loss subsequently the menopause. A lesser amount of women will get this as they aged 65 with a complete head of hair loss [9]. The growing phase of hair is slowing down in female pattern baldness. It also takes longer for new hair to begin growing. Hair glands shrink, foremost the hair that does grow to be thinner and finer [10]. This can outcome in hair that certainly breaks.

1.3 Epidemiology of hair loss disorder:

The Male pattern hair loss (MPHL), which is similarly famous as androgenic alopecia (AGA), is the greatest communal form of damage of hair occurred in males. Likewise, female pattern hair loss (FPHL) is a peak communal system of loss of hair in females. Meanwhile, the occurrence and incidence of MPHL are mostly reliant on race and age [11].

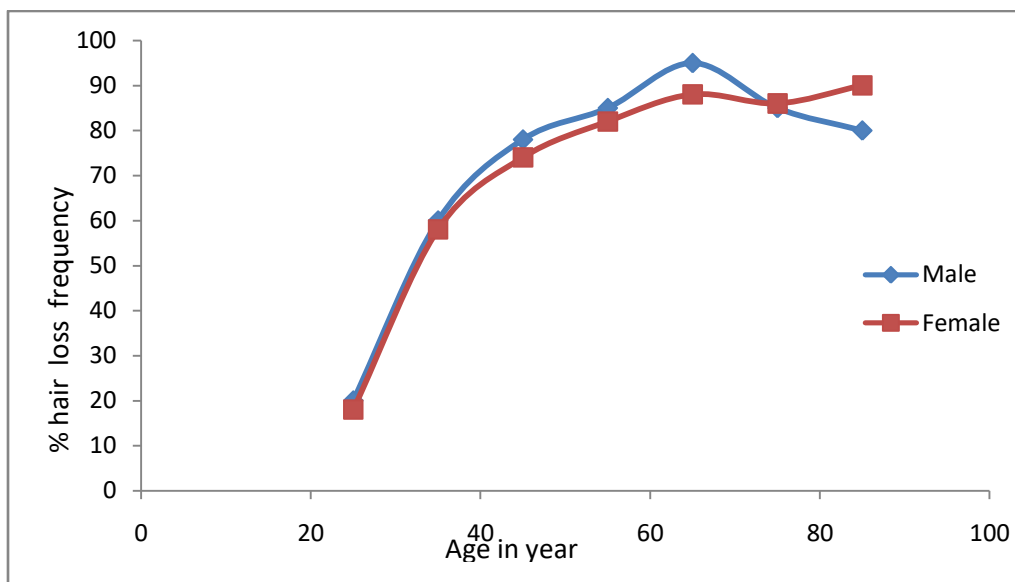


Figure 2: Male and female baldness with age

Different countries like Japanese, Chinese, and American African individuals are exaggerated fewer than Caucasians. Its occurrence increases by age (Figure 2). Pervasiveness values have adjustable ranges which start from 16–96%, contingent on the phase cluster and whether or not minor forms of MPHL are comprised. MPHL is comparable to the prevalence values for FPHL. The strictness of MPHL is grounded on the Norwood Hamilton Arrangement, (Figure 3) that considering into the factors bitemporal and vertex hair loss [12]. FPHL evaluation is carried out on the base of the Ludwig scale, in which it varies from I-III. The system of the classification schemes vary grounded on the opinion that hair loss and retreating in males usually normally happens in the logical style and even includes the vertex and temporal section through thrifty the occipital section; the diffuse retreating and also loss of thickness with a usual circulation and protection of the anterior hairline is mostly regularly gotten in women [13].

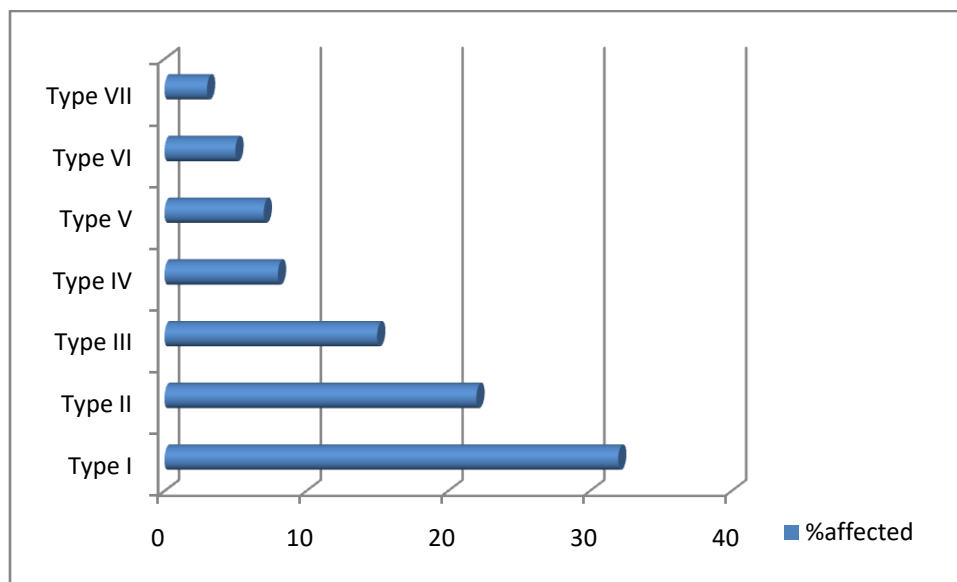


Figure 3: Baldness in 1000men age 18 and more (Norwood classification)

1.4Pathophysiology of hair loss:

The pathophysiology occurs in cycles generally around 40 years (0-78%) in the male's hair extend to the end of their relaxing stage every day and may drop out once further than 100 fall out in a day, telogen effluvium which is clinical hair loss might happen.

The drug which may be related with the telogen effluvium include b blockers, age converting enzyme inhibitor, anticoagulants, oral contraceptive, antithyroid medicines, nonsteroidal anti-inflammatory, and uricosuric agents, histamine 2 antagonist, certain antidepressants, numerous mood stabilizers etc. [14].

2.0Causes of hair loss:

Causes increase with age and also to person through a family past of hair loss disorder. Males have higher rates of androgenic alopecia, while women have higher rates of telogen effluvium.

2.1. Hereditary causes: These are among the main causes of hair loss when somebody has a genetic history; hereditary hair loss is not really a disease.

There has been researching to comprehend the source of this kind of hair loss. Beneath the influence of the hormone of men testosterone, the cycle of hair growth which is usual changes, subsequent in smaller, diluent or "normal miniaturized" hair. Ultimately, hair development in definite portions of the scalp rests entirely, which may lead to a distinctive pattern of hair loss.

Opposing from the widespread understanding that hairlessness is inborn starting from one's mother's personal, the state appears to be contingent on genes donated by both parents.

Symptoms include thinning of the hair start in Hereditary-pattern baldness starts. Hairs on the padding, in the container or on the scour are the untrustworthy indications of the hair loss. Hence, the normal non-balding being misses 100 hairs each day, and even additional hair might fall out beneath definite situations, such as after ward delivery or a thoughtful sickness.

In males, loss of hair naturally activates by the shrines and crown and even proceeds to an M-shaped arrangement. Mostly in the progressive stage, a rim of hairs sideways the hind and side of scalp leftovers.

Although in females, hair loss has a habit of being extra extensive then healthier concealed. Top of the head dejected the middle is typically pretentious mostly, which is often in a "Christmas tree" pattern. Which is in disparity to men, in females the hair lines sideways the forehead and temples frequently remnants usual [15].

2.2 Hormonal changes: These can cause temporary hair loss example include:

- (a) Changes occurred in menopause
- (b) Changes occurred in pregnancy etc.

Considering what happens in menopause:

Every woman kind most knowledge Menopause in certain fact of her exists. Throughout the period, mostly the body encountered through common physical vagaries which are adjusted to uneven hormone levels. Certain women have displeasing signs during the time of the menopause which may, comprising mood swings, insomnia, etc.

Mostly some female's capability inclusive hair retreating rather than perceptible bare spots. In which the retreating might occur on the front, sides, or top of the head during brushing and showering hair may also fall out in large amounts.

The research proposes that loss of hair through menopause is as an outcome of a hormonal disparity. Unambiguously, it's linked to a sank construction of the estrogen and progesterone. These hormones said hair raise quicker and halt for longer in the head. If the levels of estrogen and progesterone decrease, this will contribute to grows more slowly hair and also becomes much thinner. A reduction in these hormones may trigger growth in the making of androgens or even a set of male hormones [15].

Considering what happened in pregnancy, as each day, both males and females drop an average of around 50 to 100 hairs every day. For the period of pregnancy, estrogen stages sluggish down the natural cycle of hair sac shedding. Due to this result, many females may actually lose rarer hairs while pregnant. But sometimes that's not always the situation. Other causes may include;

Hormonal shift:

Many females may experience hair diminishing and shedding due to shock or stress. The disorder is called telogen effluvium, and it disturbs a lesser number of women during pregnancy.

Thyroid problem:

Thyroid conditions, resembling hyperthyroidism (increase in thyroid hormone) or hypothyroidism (decrease in thyroid hormone), might be hard to plug during pregnancy.

Other causes include health issues, iron deficiency, etc.

2.3 Medical conditions:

The medical situations which might cause hair loss include:

(a) Thyroid disease (b) scalp infection like ringworm etc.

Hence, Medical situations that might source hair loss comprise thyroid ailment, alopecia areata (an autoimmune infection which outbreaks hair follicles), then scalp contaminations like ringworm. Diseases that might cause damaging, such as lichen planus, etc., can outcome in undying hair loss due to the scarring.

Hair loss can touch your whole body or your scalp. It can be due to the outcome of heredity, medical condition or hormonal changes. Hair loss is most common in males but although even the females experience. Baldness classically rises to undue hair loss from our scalp. It affected by hereditary (or genes) hair loss and age is the greatest mutual cause of baldness. Certain societies choose to leave their hair loss occurs in its sequence untouched and unconcealed. While some shield their baldness with the hairstyle.

2.4 Nutritional causes:

Although, several nutritional deficiencies cause hair loss you might not be aware of it. Our hair is only as vigorous as our diet and how well our body engrosses the nutrients we eat. If we aren't appropriately assimilating food and accomplishment the right nutrients, our bodies can't do their enchanted thing and keep us observing and feeling prodigious. Our hair, skin, and nails are often some of the first physical signs something is missing in our diets.

Examples are; zinc, protein, vitamin A, vitamin c, iron, healthy fat, and Sulphur.

2.5. Stressful event: After a physical or emotional shock, this kind of hair loss is provisional; it comes back after the discovery of the stress.

2.6 Medication and supplements: The hair loss can also be occurred by the adverse effects caused by some drugs, like drug used in cancer, heart problem, depression, gout, and hypertension.

3.0 Symptoms of hair loss:

Hair loss is an autoimmune syndrome which is characterized by Alopecia areata. When, the immune system blunders vigorous cells for foreign substances an autoimmune infection progresses. Habitually, the immune system guards your body in contradiction of extraneous attackers, like viruses and bacteria. During alopecia areata our immune system is misguidedly abouts our hair follicles [16]. Hair follicles are the constructions from which hairs produce. The follicles stop generating and hair becomes smaller, leading to hair loss.

Canvassers don't know what generates the immune system to spell hair follicles; due to this the precise reason for this disorder isn't known. Conversely, it maximum frequently transpires in individuals who have family antiquity of other autoimmune infections, like type 1 diabetes. Due to this reason some scientists doubtful that genetics may subsidize the progress of alopecia areata. Also, trust that definite aspects in the environment are desirable to generate alopecia areata in individuals who are genetically disposed to the disease [17].

The indications of hair loss disorder may comprise the following:

- **Gradual thinning on top of head:** This is the greatest mutual type of hair loss, affecting equally males and females as they age.
- **Circular or patchy bald spots:** Certain people involvement smooth, coin-sized bald spots. This kind of hair loss regularly touches the objective of the scalp.
- **Sudden loosening of hair:** An emotional shock or physical can origin hair to loosen.
- **Patches of scaling that spread over the scalp:** The mark of ringworm. It may be escorted by broken hair, soreness, bump and, at times, discharge.

4. Diagnosis:

Previously creating an opinion, medical history is compulsory from your doctor and will possibly give you a physical examination. The person also accomplishes trials, such as the following:

- **Plasma test:** This one may support expose health situations associated with hair defeat.

- Tweak test: in this, your doctor moderately jerks numerous dozen tresses so that to see how numerous may derive out. This will aid to regulate the phase of the detaching procedure.
- Scalp biopsy: this one your examiner or doctor predicament starts starting from skin otherwise from rare hair stugged from the scalp to scrutinize the hair origins. This helps to determine whether contamination is instigating hair loss.
- Light microscopy: Generally doctor will use a special device to examine hairs sheared at their roots. Microscopy aids disclose possible syndromes of the hair shaft.

In most of the suitcases of thinning, and especially in individual belongings of severe hair loss, it is suggested to pursue advice as of a doctor or dermatologist [18]. Numerous kinds of diminishing have underlying hereditary or health-related sources, in which a competent professional will be able to analyze.

5. Treatment of hair loss disorder

Operative management for certain kinds of hair loss is obtainable. Meanwhile, effectiveness is able to converse hair defeat, or at minimum measured further thinning. Through certain situations are like patchy hair loss (alopecia areata) where, the hair can regrow underprivileged of performance within a year [19]. The treatments for hair loss may include prescriptions, surgery to encourage hair evolution and deliberate hair loss.

Selected examples of the hair loss treatments prescriptions might include [20-22]:

- Corticosteroids: The vaccinations of corticosteroids into the scalp container are used to treat alopecia areata. These include mainly cortisol (hydrocortisone). This kind of handling is recurring on a monthly basis. Oral pills for widespread hair loss might be used for alopecia areata. Outcomes might yield up to a month to be seen. Below is the structure of corticosteroids (Figure 4).

Figure 4: Drug used in hair loss treatment

- Minoxidil: Also known as Rogaine, is a non-prescription medicine permitted for masculine pattern baldness and alopecia areata. In a liquid or fluff, it is scrubbed into the scalp twice a daytime. Selected people have a sensitized response to the propylene glycol in the minoxidil solution and minoxidil. The foam was established without propylene glycol. It's not all users that will regrow hair. Below is the structure of minoxidil (Figure 4).
- Different other drugs: In case of hair loss in men another new drug dutasteride (Figure 4) is used via oral route, while in case of women the use of oral contraceptives and spironolactone may be recommended for treatment of hair loss.

6. Summary:

Loss of hair is a communal problematic in both males and females which is also known as baldness or alopecia which is characterized by losing hair commencing portion of the body or head psychological suffering that occurs when some people encountered hair loss, mostly head is involved in baldness.

The correct diagnose of hair disorder is multifaceted and involves the estimation of scientific presentation, physical inspection, laboratory test, and account. Loss of hair may be characterized as hair shaft irregularities, perpetual alopecia or non-permanent alopecia. The general type is non-permanent alopecia comprise alopecia areata, androgenetic alopecia, traction alopecia, and telogen effluvium. Hair loss is classified into two which include male pattern hairlessness and female pattern hairlessness. Hence female array is less common in comparison to male pattern baldness, and various causes of baldness may include hormones, medical history, genetic history, stressful events, and many other things. In conclusion, we have observed that hair loss disorder is most common in males rather than females.

Conflict of interest

The authors declare that they have no conflict of interests.

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