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### Profile of Hirsute Women in Kashmir Valley

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### **Abstract:**

**Background:** Hirsutism is a common condition affecting up to about 10% of women. Although primarily of cosmetic, psychological & social concern, it may be the sign of a more serious medical indication.

**Aim:** Aim of the study was to determine the clinical, investigative and treatment profile of hirsute females.

**Methods:** Fifty Kashmiri females presenting with hirsutism in the reproductive age were prospectively evaluated clinically and biochemically.

**Results:** Mean age of patients was  $32 \pm 5.8$  years and mean Ferriman Gallwey (F-G) score was  $11.3 \pm 1.6$ . Eighty six percent of the patients had involvement of face followed by chest and inner thighs. Menstrual irregularity, seborrhea and acne were the common associated clinical features. Thirty six patients had altered biochemical parameters with 16 patients having polycystic ovaries on ultrasonography (USG). Polycystic Ovarian Syndrome (PCOS) was the commonest cause followed by idiopathic hirsutism. Twenty three patients were referred to endocrinology and gynaecology departments for further management. Treatment modalities used were antiandrogens in 17, Eflornithine in 7, electrolysis in 5 and laser epilation in 11 patients

## Introduction:

Hirsutism is the male pattern of terminal hair growth i.e. excessive hair growth in women in androgen stimulated locations where the occurrence of terminal hair normally is minimal or absent [1]. It is a common condition, affecting up to 10% of women, the prevalence being influenced by genetic & racial factors [2]. Hirsutism usually results from a subtle excess of androgens occurring due to central overproduction, increased peripheral conversion and decreased metabolism of androgens. Androgens stimulate hair growth, increase the size & intensify the growth and pigmentation of hair. As such, it is a clue to possible endocrine disturbance in addition to presenting cosmetic problem [1]. Also, enhanced receptor binding of androgens, lower levels of sex hormone binding globulins and oversensitivity of hair follicles to androgens may be responsible. Up to 15% of patients have idiopathic hirsutism in which there are regular ovulatory cycles and normal androgen levels [3,4]. Hirsute patients with hyperandrogenism may have accompanying signs like acanthosis nigricans, obesity, acne, seborrhea, alopecia, virilization and features of Cushing's syndrome [5]. We report clinical, investigative and treatment pattern of fifty Kashmiri hirsute females.

## Material and Methods:

Fifty females in the age group of 15 to 45 years presenting with hirsutism at the Dermatology outpatient department of SKIMS Medical College hospital, from June 2006 to June 2008, were included in the study. A written informed consent was taken from all the patients. Pregnant females and those using medications like topical or oral steroids and oral contraceptives for other diseases were excluded from study.

A thorough history related to onset & duration of hirsutism, stress, weight gain, medications, menstrual irregularities, infertility, deepening of voice, family history of hirsutism & systemic diseases like hypertension & diabetes was taken. Clinical examination included thorough systemic examination and general physical examination including weight & height measurement and waist-hip ratio. Cutaneous examination was done for the pattern & density of hair growth and assessed by Ferriman Gallwey (F-G) scoring. This involves adding an investigator's separate scores (on a scale of 0-4) of terminal hair in nine body areas (upper lip; chin; chest; upper and lower abdomen; thighs; upper and lower back; and upper arms); the maximum score is 36. An F-G score of 8 or more has generally been considered to indicate hirsutism [6]. Clinical hyperandrogenism was defined by the presence of seborrhea, acne and androgenic alopecia with hirsutism [7].

Laboratory investigations included serum levels of free testosterone, luteinising hormone, follicle stimulating hormone, cortisol, prolactin, lipids, thyroid function test, fasting & postprandial glucose, insulin (in obese), pelvic & abdominal USG. Polycystic ovaries were diagnosed on pelvic USG by the presence of > 12 follicles measuring 2-9 mm in diameter and/or > 10 ml ovarian volume [8]. Few patients were referred for gynaecology & endocrinology consultation where as various modalities of treatment were tried in others.

## Results:

Twenty four patients were in the age group of 30-40 years, 20 in 20-30 years, 4 in 15-20 and 2 in 40-45 years, with mean age of  $32 \pm 5.8$ . The Ferriman -Gallwey score ranged from 8 to 19 with a mean and SD of  $11.3 \pm 1.6$ . Twenty seven patients had moderate, 20 had mild and only 3 patients had severe hirsutism. Table 1 shows the pattern of hair distribution with thick, dark,

coarse terminal hair seen on face (upper lip, beard & temples) in 43 patients. Menstrual irregularity was seen in 24, seborrhea in 21 and acne in 17 patients. Other associated clinical features are depicted in table 2. Fourteen patients had normal biochemical profile indicating idiopathic hirsutism while as 36 had altered biochemical parameters (table 3) with 16 having polycystic ovaries on USG. Eleven patients were referred to Endocrinology consultation and 12 to Gynaecology consultation out of which 17 patients with hirsutism, acne, seborrhea & menstrual irregularities were put on oral treatment with Cyproterone acetate 2mg + Ethinyl estradiol 35µg for 6 months. Seven patients were put on topical treatment with Eflornithine which showed thinning of hair after 2 months of twice daily application. Patients had mild stinging sensation only. Electrolysis was done on 5 patients, 3 of whom developed folliculitis. Repeated sessions were done on these patients but two showed regrowth after 3 months. Eleven patients got laser epilation done with Intense Pulsed Light (IPL) and showed satisfactory results after 5-6 sessions.

## Discussion:

Hirsutism is a distressing and relatively common problem affecting between 5% and 10% of women which may prove difficult to manage [2]. It has both endocrine and non-endocrine causes. Both functional and neoplastic disorders of ovaries, adrenal and pituitary may lead to hirsutism, the commonest being PCOS [4]. Clinically the most common sign of hyperandrogenism in PCOS is hirsutism, the prevalence being 17% to 83% [3]. Non-endocrine causes are idiopathic, familial and medications [9]. In endocrine disorders excess of androgen is present whereas in idiopathic hirsutism there is a primary increase in skin 5 alpha-reductase enzyme activity and possibly an alteration in androgen receptor function [2]. The majority of our patients had involvement of the face, followed by the chest and inner thighs. Hirsute patients are more concerned for facial hair than those on other body areas signifying that facial hair need to be given higher than current value in F-G score [10]. Clinical hyperandrogenism was seen in 28 (56%) patients with seborrhea, acne, alopecia and acanthosis nigricans being common signs. Controlling obesity & preventing insulin resistance can result in lower androgen levels & less hirsutism. Our patients were given treatment only after proper investigations and were followed up for 6 months. Cyproterone acetate, an anti-androgen, is frequently used to treat hirsutism, usually in combination with ethinyl estradiol [11]. Patients with hyperandrogenism were prescribed a combination of these two drugs for 6 months and results were satisfactory. Eflornithine cream inhibits irreversibly ornithine decarboxylase, delays the initiation of anagen & keeps hair in telogen [12]. Patients showed thinning of facial hair after two months. Laser epilation has excellent response if biochemical abnormalities are simultaneously corrected [13]. Patients with fair skin & dark hair responded better and patient satisfaction was higher due to pain free treatment, long hair free interval, thinning of hair & low incidence of side effects.

Our study shows that hirsutism is a common cosmetic problem in Kashmiri women and patients have associated endocrine abnormalities which need to be corrected before using permanent treatment measures in the form of laser or electrolysis. Also, a large proportion of hirsute females need to be studied and followed up for long time to show the long term response of various treatment modalities.

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