

Clinical Study of Hirsutism & its Management with Unani Drugs in Comparison with Standard Control Drug-A Research Study

Dr. Zakera Begum¹, Dr. Hidayath Khan Mehdi², Dr. B Tasneem Firdose³, Dr. Shaik Rukhiya Banu⁴, Dr Amreen Begum⁵

¹Associate Professor, Dept. of Amraze Niswan-wa-Qabalat, Inamdar Unani Medical College & Hospital, Kalaburagi, Karnataka, India.

²Associate Professor, Dept of IlmulAdvia, Inamdar Unani Medical College & Hospital Kalaburagi, Karnataka, India.

³Associate Professor, Dept. of Amraze Niswan-wa-Qabalat, Tipu Sultan Unani Medical College & Hospital Kalaburagi, Karnataka, India.

⁴Associate Professor, Dept. of AmrazeAtfal, Tipu Sultan Unani Medical College & Hospital Kalaburagi, Karnataka, India.

⁵Assistant Professor, Dept. of Amraze Niswan-wa-Qabalat, Govt. NizamiaTibbi College & Hospital, Hyderabad, Telangana, India.

Abstract:

Hirsutism is a condition that can have medical, social, and psychological implications, affecting 5% to 10% of women worldwide. Management options include cosmetic procedures and pharmacological interventions. However, medications used to treat hirsutism can have side effects, ranging from mild symptoms like nausea and headaches to more serious complications such as vascular clots, heart attacks, hepatotoxicity, osteoporosis, and effeminization of a male fetus. Therefore, this study aims to investigate the potential benefits of medicinal plants on hirsutism as a complementary approach, specifically whether they can be used as adjuvants to cosmetic procedures. In total, ten trials were identified in the search. The results suggested that various herbs, including Shahitra, Chiraita, Majeetah, Dalchini, Aftimoon, Afsanteen etc. have the potential as herbal remedies for hirsutism. However, further extensive well-designed studies involving a large sample size on the most promising herbs are necessary to determine their efficacy.

Keywords: Hirsutism, Hyperandrogenism, Sue Tarkeeb Amraz e Adad, PCOS, Herbal drugs viz. Shahitra, Chiraita, Tukhm-e-Gazar, Majeeth, Darchini, Barg-e-Sudab, Afsanteen, Aftimoon, Tukhm-e-Sambhalu, Barinjasif etc.

I. INTRODUCTION OF HIRSUTISM

As World is developing, the peoples are also modifying themselves in modernization which becomes great impact on health and most of the population measures different lifestyle disorders and become a big issue for health and social life. For women to be healthy, physically and mentally the regular menstrual cycles, body weight and beauty is most important. Any disturbances in these factors results in physical, mental and social health problems. Now a day's HIRSUTISM (Latin Hirsutus=Shaggy, Hairy) is a common Gynaecological, Endocrinological as well as Dermatological, Cosmetic and Psychogenic disorder in women which is characterized by excessive growth of terminal hairs in women in a male distribution, specifically growth of midline hair over the upper lip, chin, chest, abdomen, back, linea alba and inner thighs.³⁰

In women, these areas normally do not have terminal hair. Isolated hirsutism is usually gradual in onset and is due to mild increase in circulating androgen or increased sensitivity of pilosebaceous units to androgen. Menstrual irregularity and amenorrhoea are common, but some woman with hirsutism may have regular menstrual cycles. Hirsutism is usually the result of an underlying endocrine imbalance, which may be adrenal, ovarian or central. Hirsutism is a common presenting symptom in dermatology, endocrinology, and gynecology clinics, and one that is considered to be the cause of much psychological distress, great anxiety and social difficulty. Facial hirsutism often leads to the avoidance of social situations and to symptoms of anxiety and depression.

II. Unani Concept of Hirsutism:

The term for hirsutism in unani classical books is "kasarat-e-sha'r"²². It is a complication of prolonged amenorrhoea with other male features such as hoarseness of voice, male body pattern, acne and

clitoromegaly. Alteration of normal temperament of female was considered as important factor for hirsutism. The Ancient physicians said that persistence of amenorrhea for a long duration causes alteration in internal environment of female body and equilibrium is significantly disturbed which results in formation of thick hairs over the body. These physicians were observed that development of masculine features is more common in obese females. After the careful study of Hirsutism its pathology and causes, the drugs were selected mostly with action of Emmenagogue, Diuretic, Demulcent, Expectorant of Phlegm, Blood purifiers, Depilators, Skin protective and hair growth controller. The formulae were selected according to ancient Unani books which have been used by ancient physicians to treat the Hirsutism.

III. Aims and Objectives

- ❖ To evaluate the efficacy of Unani drugs in the management of Hirsutism.
- ❖ To give safe, effective and economical drugs with close temperament to remedy.
- ❖ To popularize the Unani medicines in the management of Hirsutism.
- ❖ To eradicate the psychological effect of Hirsutism like significant degree of depression and interpersonal conflicts.
- ❖ To compare the efficacy of Test drugs with standard control drugs.
- ❖ To reduce the uses of painful techniques of hair removal like threading, bleaching, plucking and shaving.
- ❖ To avoid the complications of Laser therapy.
- ❖ To reduce the risk of Virilism.

IV. Management of Hirsutism:-





Management of Hirsutism includes weight reduction, diet therapy, medical and cosmetic measures.

- **Weight reduction:** - In obese patients' weight reduction is first line of treatment. BMI < 25 improves menstrual disorders, hyperandrogenemia (Hirsutism, acne).
- **Diet therapy:** - low carbohydrate diet can help in weight reduction which results in regular menstrual cycles.
- **Medical management:** - To suppress or neutralize the excess androgen action and regular menstrual cycles. The useful drugs in Hirsutism is combined oral contraceptive pills (norgestimate, desogestrel, gestodine), anti-androgens i.e. cyproterone acetate, spironolactone, flutamide, ketoconazole. In OCPs progestin suppresses LH and oestrogen improves SHBG and reduce free testosterone.
- **Removal of Hair:** - The excess hair is to be removed by bleaching, twitching, epilation, waxing, laser, shaving or electrolysis.







V. Study Design:

The study was conducted during the period between 2016 -18 in the Post Graduate Dept. of Ilmul Qabala at Wa Amraz-E-Niswan, in Govt. Nizamia Tibbi College and Govt. Nizamia General Hospital from OPD and IPD.

VI. Description of Drugs used .

Name of Drugs	Unani Name of Drugs	Dose of Drugs	Photos
SHAHITRA	Shahatraj; Baqlatul-muluk; Sultanul-Baqul	5-10gms	   
CHIRAITA	Chiraita	5-7gms.	
TUKHME-GAZAR	Tukhm-e-Gajar	5-7gms.	
MAJEETH	Majeeth / Fovvah	:4-5gms.	

DARCHINI	Dar-chini / Dar-sini	1-3gms.	
BARG-ESUDAB	Barg-e-sudab	5-7grams	
AFSANTEEN	Afsanteen / khatraq	5-7grams	
AFTIMOON	: Kasus / Aftimoon	4-5grams	
TUKHME-TURB	Tukhm-e-Turb	3 – 5 grams	 تخم مولی - بیج مولی
TUKM-E-ANISOON	Tukhm-e-Anisoon	2-5gms.	
IRSA	Irsa	3-5grams	 جڑ ایرسا ، ایرسہ
TUKHM-E-SAMBHALU	Tukhm-e-sambhalu	3-5gms.	
BARINJASIF	Barinjasif	3 – 5 gms.	
BARG-E-GAUZABAN	Barg-e-Gauzaban	3 – 5	

		grams	
ZARNEEKH	Zarneekh,	0.5–1gram	
CHUNA	Aahak,Noora,Kals	0.5–1gram	
SIBRZARD:	Sibrzard,Musabbar	1–3mg	
KAF-E-DARIYA	Kaf-e-Dariya	3 –5 gms.	
JUND-E-BEDASTAR:	Jund-e-bedastar	0.5–1gram	
AS'L	As'l	20-40grams	

VII. Patients and methods

A. Study design:

The study was conducted during the period between 2016 -18 in the Post Graduate Dept.of IlmulQabalatWaAmraz-E-Niswan, inGovt.NizamiaTibbiCollegeandGovt. Nizamia General Hospital from OPD and IPD.

B. Participants:

Total 100 patients were evaluated for the study. 30 patients did not meet the inclusion criteria and 10 patients denied participation. 20 patients had irregular follow ups and left in between and hence were excluded. 40 patients taken for the study with 20 patients in each Group i.e. (Group A & Group B) and treated OPD and IPD basis in Govt. Nizamia General Hospital, Charminar, Hyd.

C. Sample size:

40 Patients of clinically diagnosed Hirsutism and divided 20 Patients in Group-A and 20 Patients in Group - B

D. Duration of Treatment:

4 Cycles, Each cycle with 20 days of duration of treatment in each month.

VIII. Selection criteria of patients:

Patients were selected on the basis of detailed history especially regarding Excessive and thick hair growth and menstrual irregularities, obesity, OCP consumptions, investigations and by special case sheet

proforma. Family history and Infertility also evaluated. Complete physical and systemic examination were performed and recorded in the case sheet proforma. Hormonal i.e. Sr. Testosterone, DHEAs, E2, TSH, FSH, LH, Prolactin and Ultrasound of Abdomen & Pelvis, evaluation done to rule out the cause of Hirsutism. Other routine biochemical investigations like CBC, CUE, RBS, HIV I & II, HBsAg, VDRL were also done.

Inclusion Criteria:-

- ☐ Age:- 15 to 50 years
- ☐ With complaint of thick & excessive hair growth
- ☐ Polycystic Ovarian Syndrome.
- ☐ Hyperandrogenism.
- ☐ Drug induced.
- ☐ Familial.
- ☐ Idiopathic.
- ☐ Patients who are willing to participate in the study with regular follow up cycles.

Exclusion Criteria:-

- ☐ Tumours of ovaries and Adrenal glands.
- ☐ Adrenal hyperplasia (Congenital or late onset)
- ☐ Cushing's syndrome.
- ☐ HAIR-AN syndrome.
- ☐ Patients with HBsAg, HIV and VDRL positive patients
- ☐ Known cases of tropical and infectious diseases

Criteria for Selection of Research Drugs:

After the careful study of hirsutism keeping in view the detail pathology and causes, the drugs were selected mostly with action of Emmenagogue, Diuretic, Demulcent, Expectorant of Phlegm, Blood purifiers, Depilators, Skin protective and hair growth controller. The formulae were selected according to ancient Unani books and the drugs which are easily available, most effective and having less side effects were selected for the trial in Group - A and in Group - B well known standard drugs were selected according to modern literature

XI. PHARMACOGNOSY

GROUP-A (MEDICINES):- It consists of Joshanda, Sufoof, Noura and Zimad.

SUFOOF (POWDER):-

S.NO	DRUG	Botanical Names	DOSAGE
1	TUKHME-ANISOON	Pimpinella anisum	3gram
2	IRSA	Iris germanica	3gram
3	TUKHME-SAMBHALU	Vitex negundo Linn.	3gram
4	BARINJASIF	Achillaeae folium	3gram
5	BARG-E-GAUZABAN	Borago officinalis Linn	3gram

JOSHANDA (DECOCTION):-

S.NO	DRUG	BOTANICAL NAME	DOSAGE
1	SHAHITRA	Fumaria indica	5gram
2	CHIRAITA	Swertia chirata	5gram
3	TUKHME-GAZAR	Daucus carota	5gram
4	MAJEETH	Rubiacardifolia	5gram
5	DARCHEENI	Cinnamomum zeylanicum	3gram
6	BARG-E-SUDAB	Rutagraveolens	5gram

7	AFSANTEEN	Artemisiaabsinthium	5gram
8	AFTIMOON	Cuscutareflexa	5gram
9	TUKHMETURB	RaphanusSativus	5gram

NOURA(DEPILATORYCREAM):-

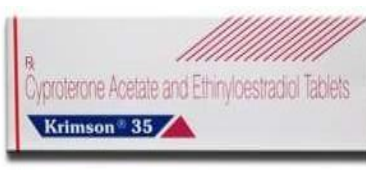

S.NO	DRUG	ScientificNames	DOSAGE
1	ZARNEEKH	Arsenictrisulphide	1gram
2	CHUNA	Calciumoxide	2gram
3	SIBRZARD	AloebarbadensisMill	3mg
4	KAF-E-DARIYA	Os sepia	1gram

ZIMAAD(PASTEFORLOCALAPPLICATION):-

S.NO	DRUG		DOSAGE
1	JUND-E-BEDASTAR	Castoreum	10gms
2	ASL	HoneyMel.	250gms

GROUP-BMEDICINES

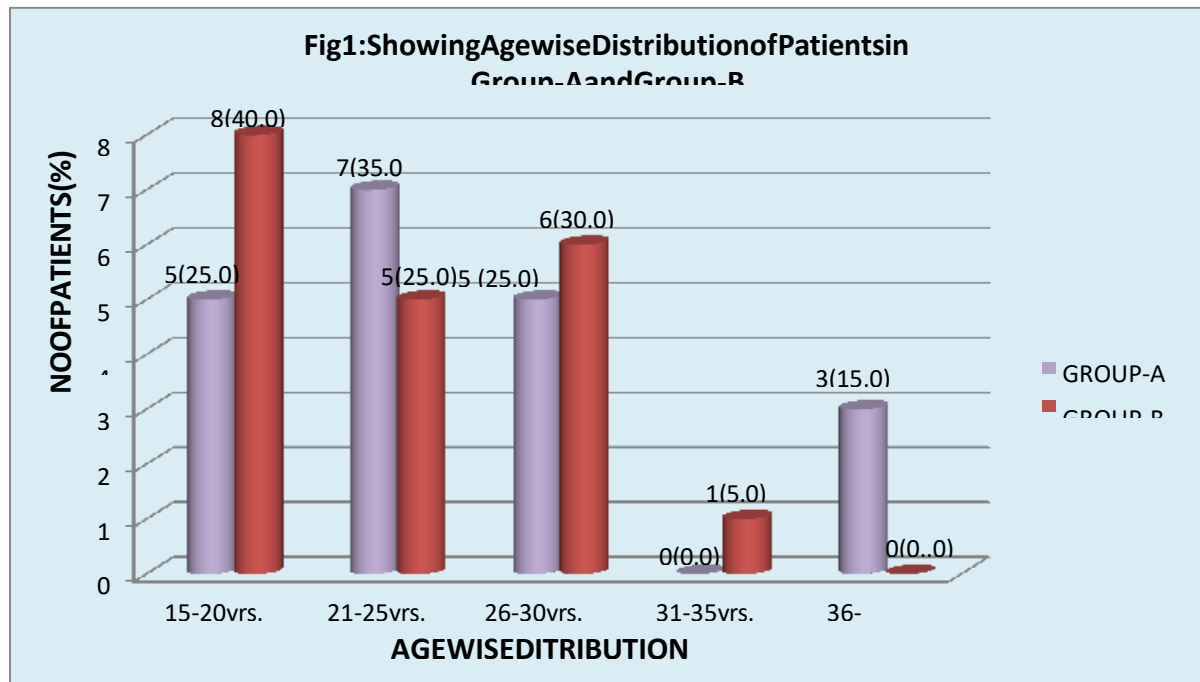
ItconsistsofTablet,depilatorypasteandCreamforregularapplication.

TAB.KRIMSON35 Composition:- Cyproterone acetate2mgandethinylestradiol35µg.	DrugForm:- Tablet Dosage:- OneTab,Onceaday.	
EFLORACREAM Eflornithine Hydrochloride 13.9% w/w	Drugform:- Cream. Dosage:- Twice a day as require.	

IX. ObservationandResults

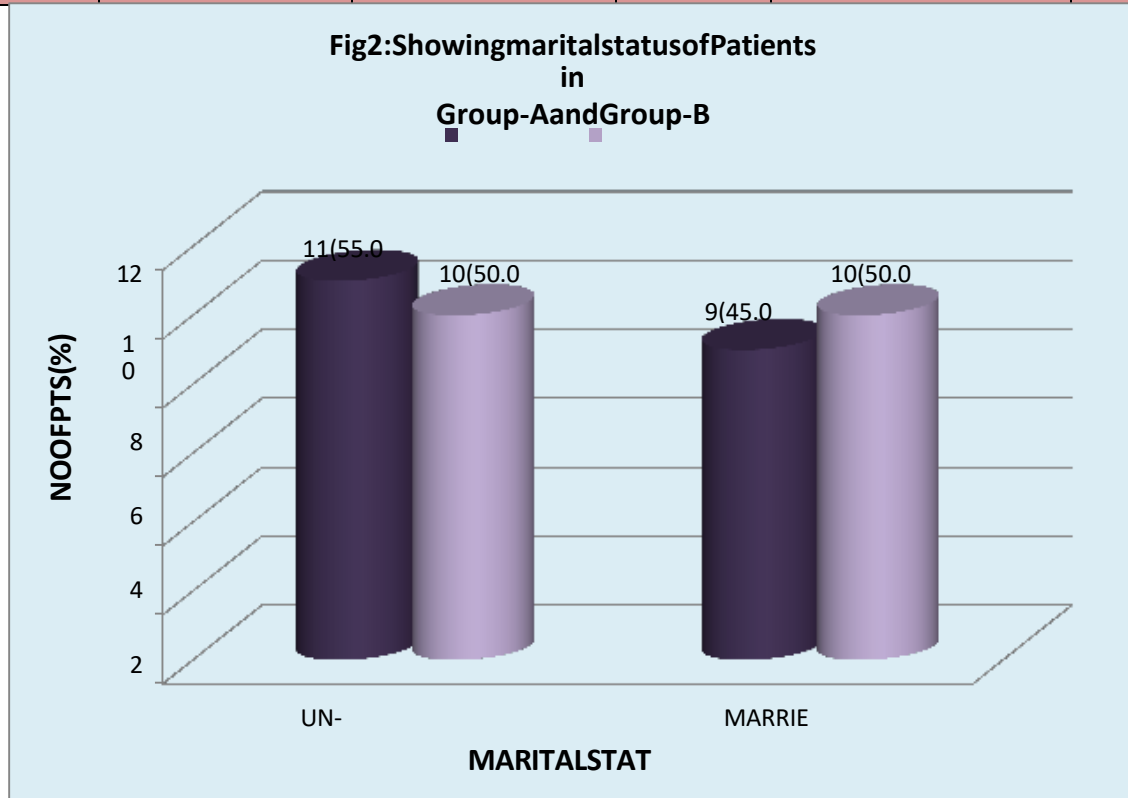
TableNo:1 DistributionofPatientsaccordingtoAgeinGroup-AandGroup-B

S. No	AGE(in year)	GROUP-A		GROUP-B	
		No.ofPatients	%	No.ofPatients	%
1	15-20	05	25.0	08	40.0
2	21-25	07	35.0	05	25.0
3	26-30	05	25.0	06	30.0
4	31-35	-	-	01	05.0
5	36-40	03	15.0	-	-
	TOTAL	20	100	20	100



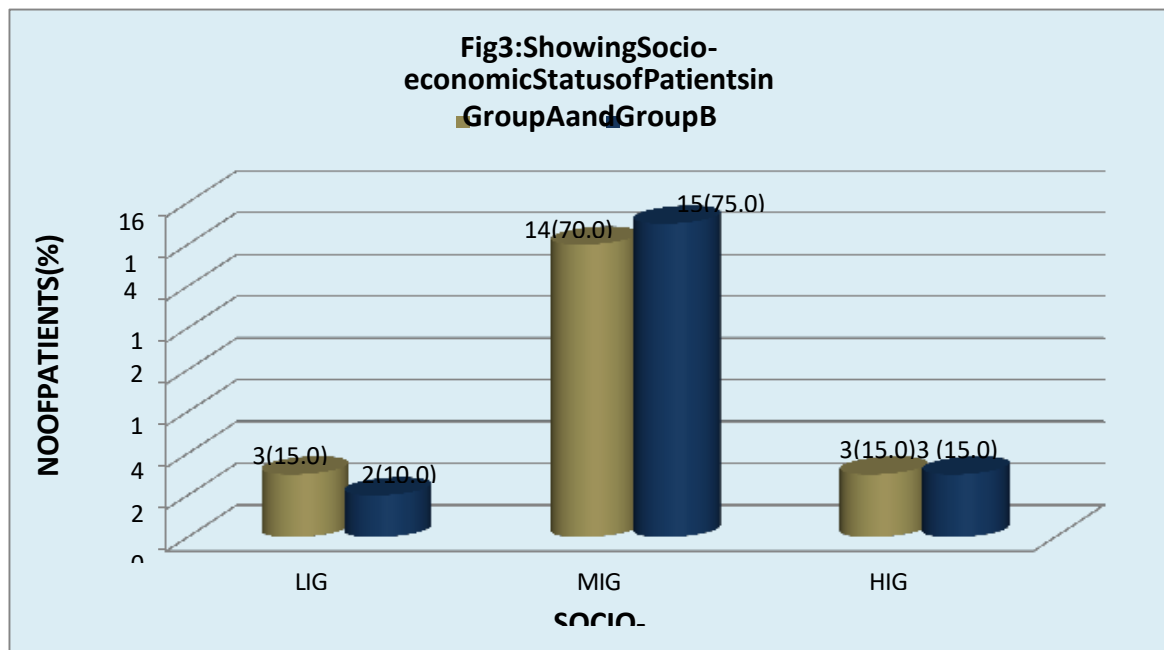
TableNo:2 Showing distribution of Patients according to marital status in Group - A and Group - B

S. No	Marital Status	Group- A		Group-B	
		No. of Patients	%	No. of Patients	%
1	Un-Married	11	45.0	10	50.0
2	Married	09	55.0	10	50.0
	TOTAL	20	100	20	100



TableNo:3 ShowingDistributionofPatientsaccordingtoSocio-economicStatusin Group – A and Group – B

S. No	Socio-economic Status	GROUP-A		GROUP-B	
		No.ofpatients	%	No.ofpatients	%
1	LIG	03	15.0	02	10.0
2	MIG	14	70.0	15	75.0
3	HIG	03	15.0	03	15.0
	TOTAL	20	100	20	100



TableNo:4 ShowingDistributionofPatientsaccordingtoTemperament

S. No	Temperament	Group-A		Group-B	
		NoofPatients	%	NoofPatients	%
1	Damvi	02	10.0	02	10.0
2	Balghami	15	75.0	14	70.0
3	Safravi	02	10.0	02	10.0
4	Saudavi	01	05.0	02	10.0
	TOTAL	20	100	20	100%

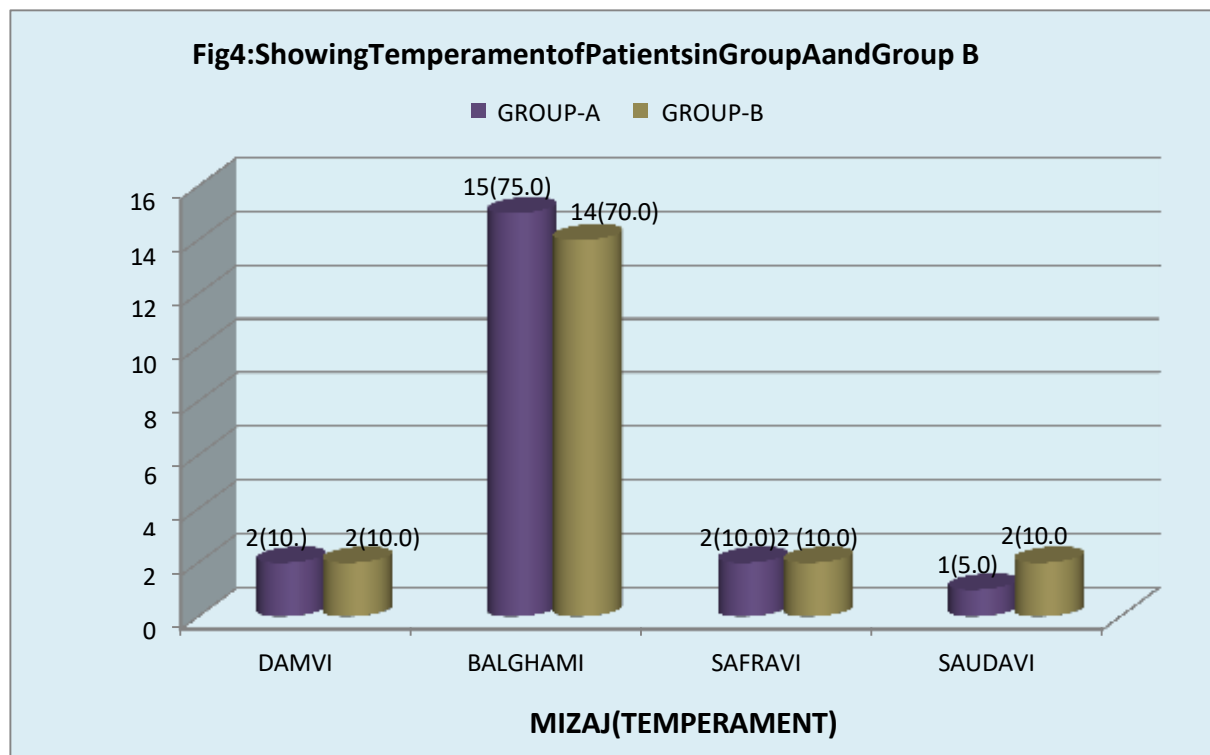
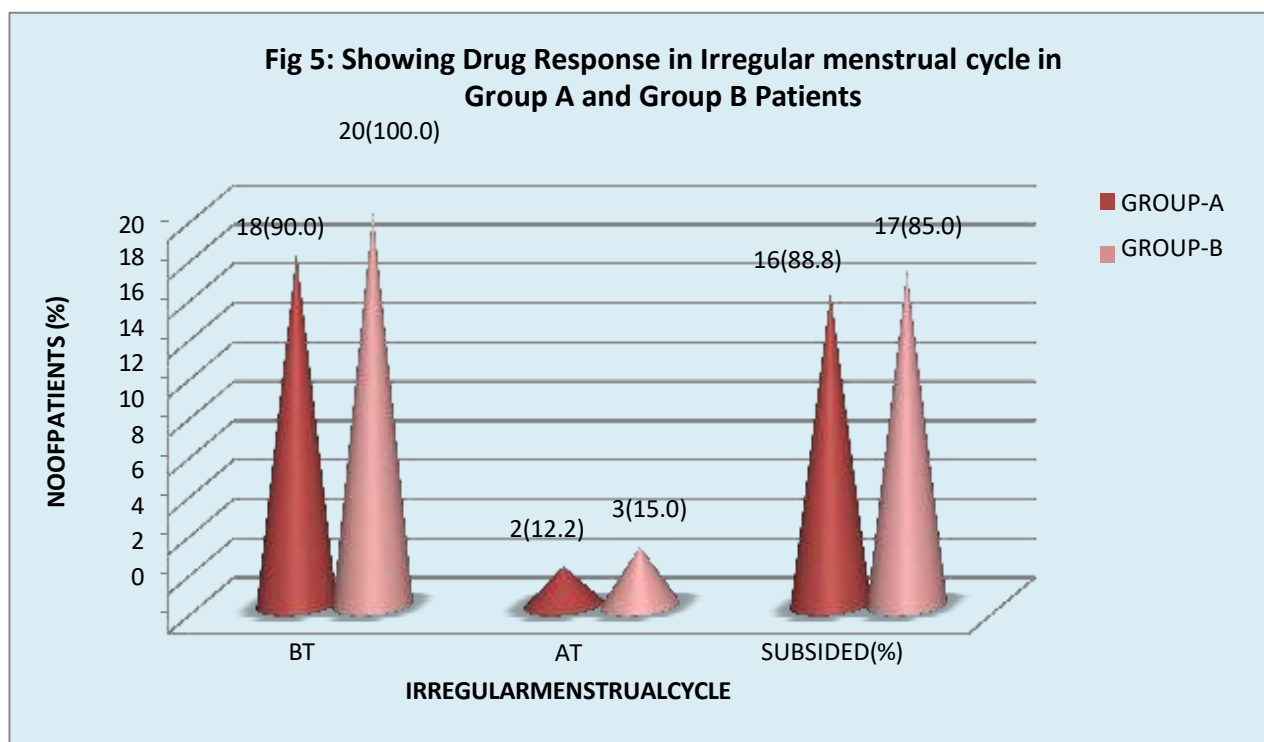


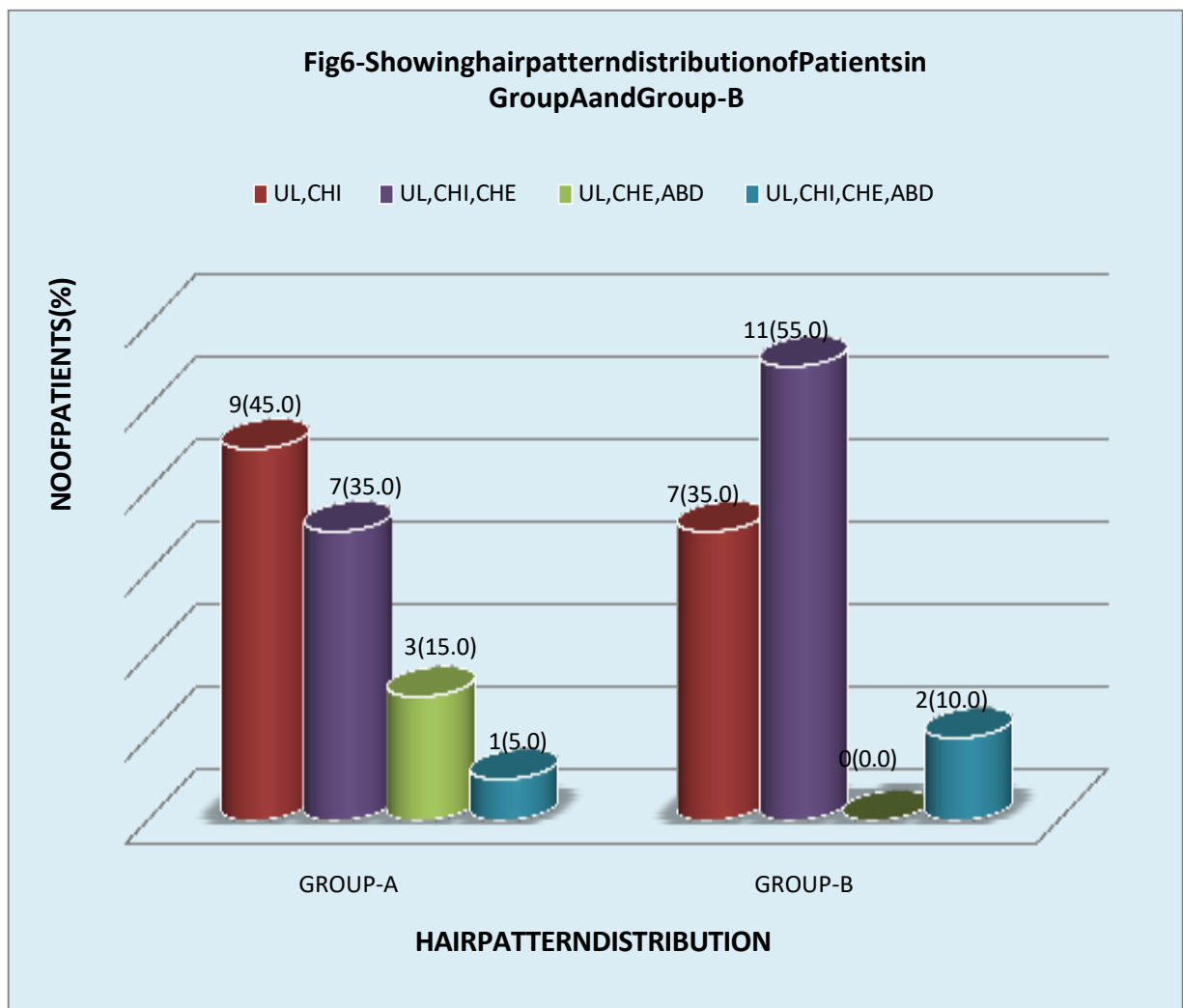
Table No: 5 Showing Menstrual Status in Group A and Group B patients

S. No	Irregular Menses	BT	AT	Subsided (%)	χ^2 -test	P Value
1	Group A	18	02	16 (88.8)	25.313	<0.0001
2	Group B	20	03	17 (85.0)	26.189	<0.0001



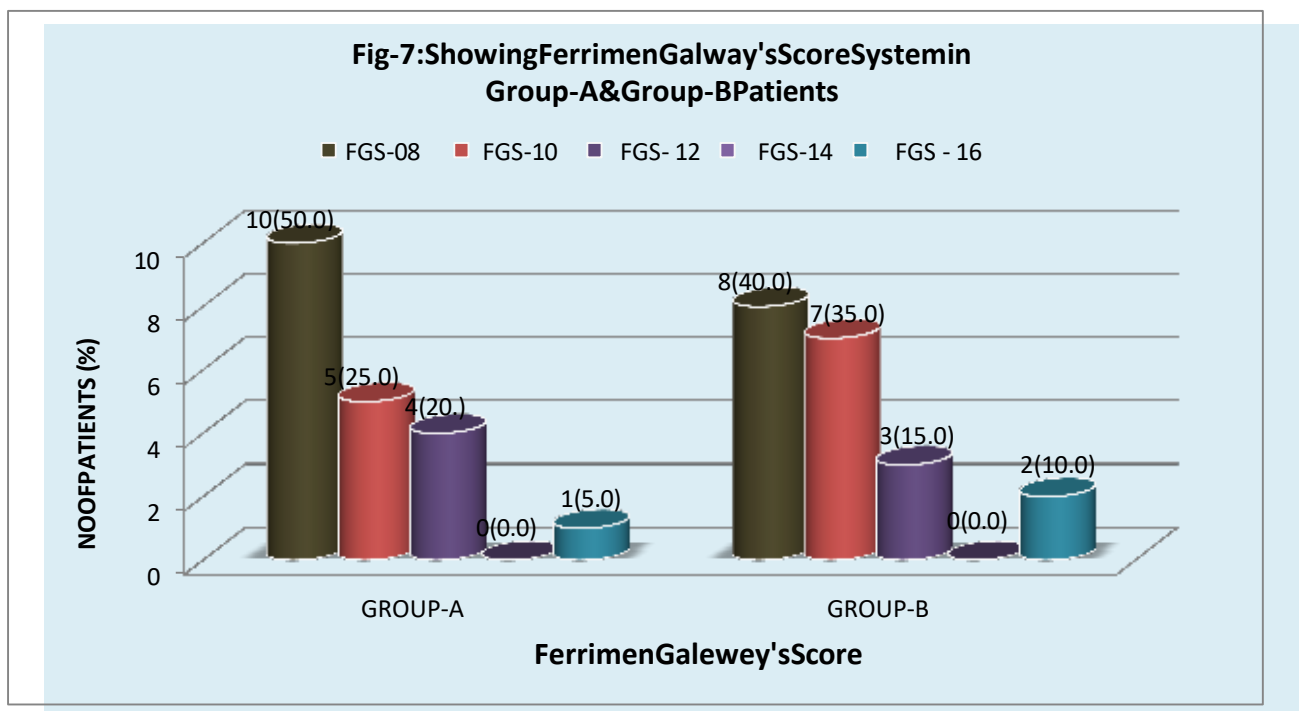
TableNo:6 ShowingHairPatternDistributionofPatientsinGroup-AandGroup-B

S. No	HairPattern Distribution	Group- A		Group-B	
		NoofPatients	%	NoofPatients	%
1	Upper Lip&Chin	09	45.0	07	35.0
2	UpperLip,Chin & Chest	07	35.0	11	55.0
3	UpperLip,Chest & Abdomen	03	15.0	0	00.0
4	UpperLip,Chin Chest & Abdomen	01	05.0	02	10.0



TableNo:7 ShowingDistributionofPatientsaccordingtoFerrimanGallwey'sScore Before Treatment in Group – A and Group – B

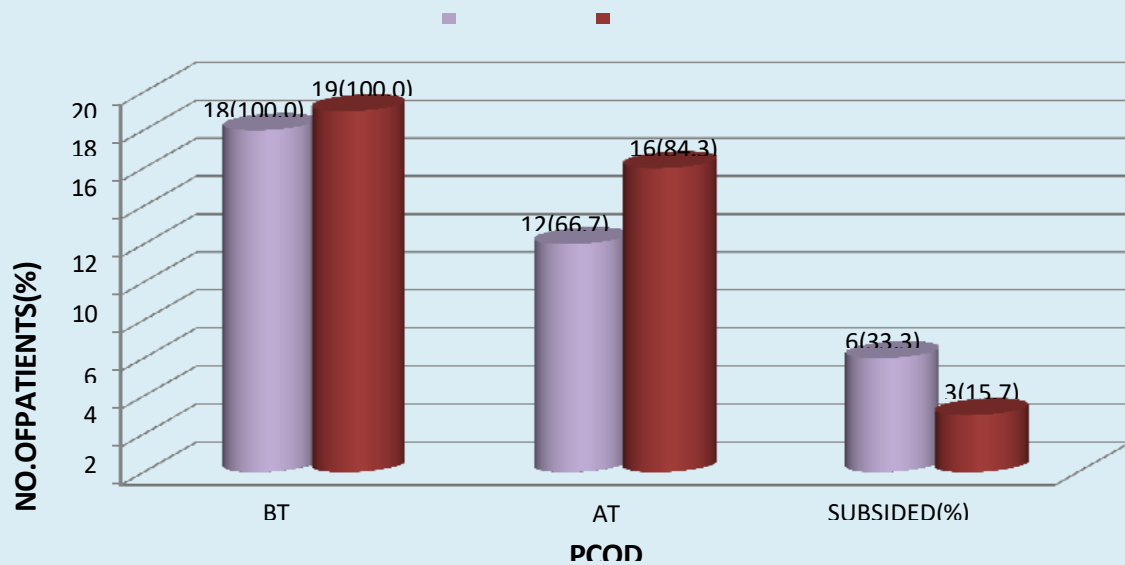
S.No	Ferriman Gallwey'sScore	Group– A		Group–B	
		NoofPatients	%	NoofPatients	%
1	08	10	50.0	08	40.0
2	10	05	25.0	07	35.0
3	12	04	20.0	03	15.0
4	14				
5	16	01	05.0	02	10.0
	TOTAL	20	100	20	100



TableNo:8 ShowingPCODStatusinGroup–AandGroup–Bpatients

S. No	PCOD	BT	AT	Subsided(%)	X ² -test	PValue
1	GROUP -A	18	12	6 (33.3)	5.000	0.025
2	GROUP -B	19	16	3 (15.7)	1.448	0.228

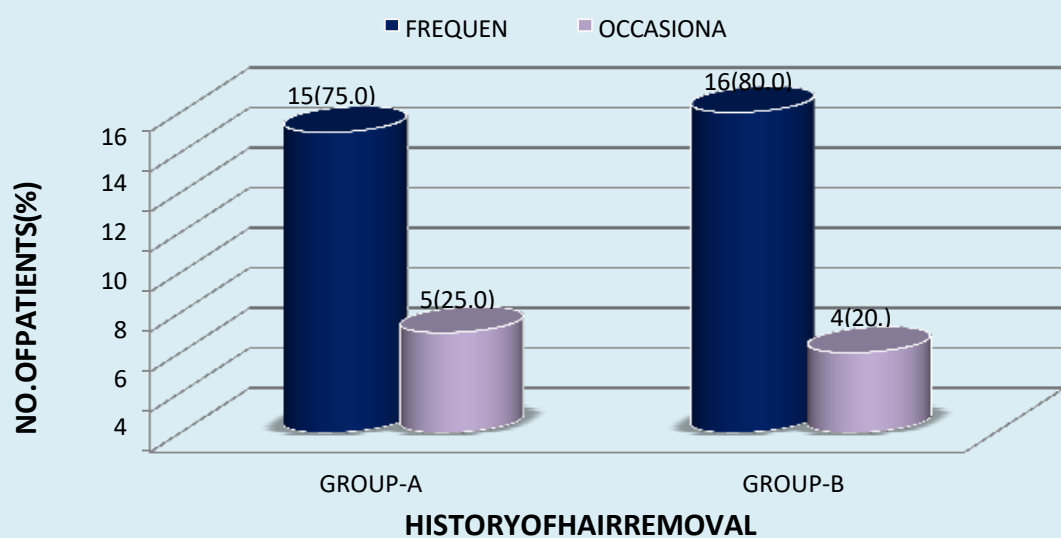
Fig8:ShowingDrugResponseinPCODinGroupAandGroupBPatients



TableNo:9 DistributionofPatientsaccordingtohistoryofHairRemovalin Group A and Group B

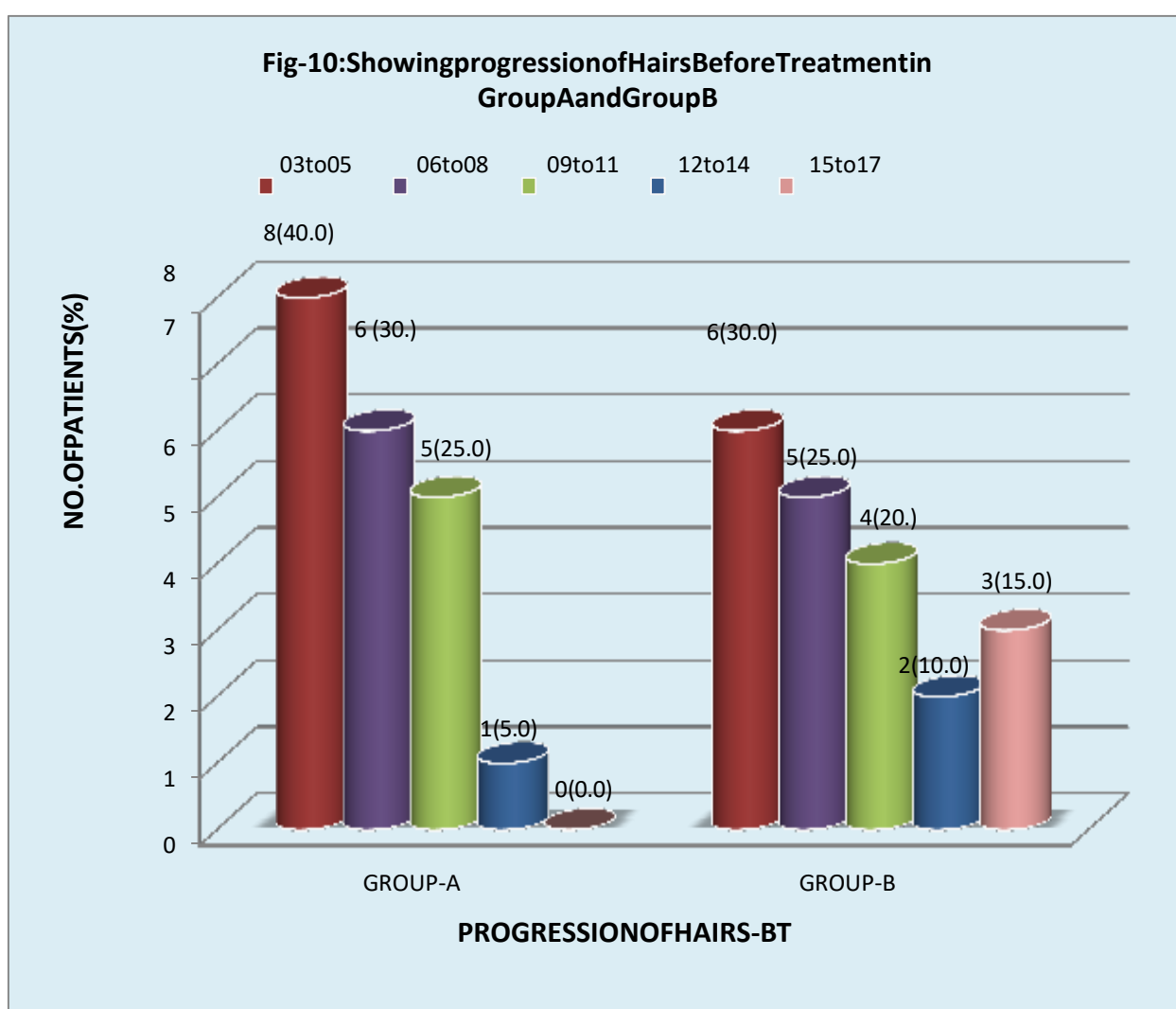
S.No	HairRemoval	Group- A		Group-B	
		No. of Patients	%	No. of Patients	%
1	Frequent	15	75.0	16	80.0
2	Occasional	05	25.0	04	20.0
	TOTAL	20	100	20	100

Fig-9:ShowingResultsinPercentage(%)AccordingtoHistoryofHair RemovalinGroup-A&Group -B



TableNo:10 ShowingProgressionofHairsbeforeTreatmentinGroupAandGroupBPatients

S.No	No.of Days	Group-A		Group-B	
		No.ofPatients	%	No.ofPatients	%
1	03- 05	08	40.0	06	30.0
2	06- 08	06	30.0	05	25.0
3	09- 11	05	25.0	04	20.0
4	12- 14	01	05.0	02	10.0
5	15- 17	NIL	00.0	03	15.0
	TOTAL	20	100	10	100



DISCUSSION

Hirsutism is a common gynaecological, endocrinological as well as dermatological and cosmetic, psychogenic disorder in women which is characterized by excessive growth of terminal hairs in women in a male distribution, specifically growth of midline hair over the upper lip, chin, chest, abdomen, back, linea alba and inner thighs. In women, these areas normally do not have terminal hair. It is due to increase in circulating androgen or increased sensitivity of pilosebaceous units to androgen. Menstrual irregularity and amenorrhoea are common.

Prevalence: In India 2.2% to 26% and in PCOD 17% to 83%, most reports in adult women with age ranged from 18-45 years. Hirsutism affects between 5-15% of all women across all ethnic backgrounds. Depending on the definition and the underlying data, approximately 40% of women have some degree of unwanted facial hair.

According to an ancient concept (Hirsutism) comes under (Su-e-tarkeeb—Amraz-e-adad). It is a complication of prolonged amenorrhoea with other male features such as hoarseness of voice, male body pattern, acne and clitoromegaly. Due to amenorrhoea body's equilibrium becomes disturbed, and the mizaj becomes su-e-mizaj. According to Ancient physicians Hirsutism is due to Amenorrhoea for a long time and alteration in internal environment of female body which results in formation of some waste and unwanted material in the body which is being excreted through skin pores and participates in the formation of thick hairs over the body. These physicians were observed that development of masculine features is more common in obese females. Those waste materials of body which have important role information of thick hairs are known as "Bukhaarat-e-Dukhan". It is a compound made up of four components such as water, soil, air and fire. As per the physiology of unani system all organs of body have four powers from which the normal power of elimination becomes weaker and power of retention and absorption become stronger then there is a more tendency of four components such as water, soil, air and fire to absorb (in the skin and hair follicles) more and more morbid material.

According to modern concept The cause of Hirsutism is purely of hormonal, common causes of Hirsutism are Polycystic Ovarian Syndrome and Increase concentration of serum androgen especially of testosterone or Decreased level of SHBG (sex hormone binding globulin) or Increased responsiveness of the target organ (skin) to the normal circulating androgens or Increased activity of 5 α -reductase which converts testosterone to DHT (Dihydrotestosterone) in the skin and hair follicles. In some patients it is due to Hyper Androgenism, Insulin Resistance, Acanthosis Nigricans (RHAIR-AN) syndrome, Androgen producing Tumours of ovaries such as Sertoli - Leydig cell tumor, Hilus cell tumor, Lipoid cell tumor and Luteoma of pregnancy. In some patients it is caused by Adrenal hyperplasia (Congenital or late onset), Cushing's syndrome and Adrenal tumours. In some Hirsute patients the causes are Iatrogenic such as Anabolic steroids i.e. Danazol, Cortisone or Anti epileptics i.e. Phenytoin, Valproic acid, Other medications such as Methyl dopa, Metoclopramide. In some Patients Hirsutism is of Genetic origin which can be seen in Androgen sensitivity syndrome, whereas some patients have Familial, and some are Idiopathic. Now a day's one more cause of Hirsutism is Cosmetics and other facial techniques i.e. waxing, bleaching, threading, plucking, shaving.

In current study of Hirsutism, Serum Testosterone, DHEAS, FSH, LH, Prolactin, TSH, E2 is ruled out and its treatment with unani drugs in comparison with standard control drug is carried out in outpatient and inpatient department of Nizamia General Hospital. Out of 100 registered patients who were clinically diagnosed as Hirsutism, 40 patients were selected for Clinical trials. On the basis of selection criteria of study those patients were divided into two groups, Group A and Group B. 20 patients were selected in each group.

Selection criteria of Patients: - The patients were selected in each group with the complaints of excessive and thick hairs on upper lip, chin, chest and abdomen, menstrual disorders include amenorrhoea, oligomenorrhoea, weight gain, acne and scalp hair fall and clinical examination of thickness and distribution of hair pattern the cases were scored on the basis of Ferriman Gallwey's scoring system. History of onset and hair removal by threading, shaving, waxing or other techniques and history of progression of hairs after removal also obtained from each patient.

The current study included inclusion and exclusion criteria.

Inclusion criteria: - It includes age 15 to 50 years with the complaints of thick and excess hair growth on face, upper lip, chin, chest and abdomen, inner thighs and back, with PCOD, menstrual disorders include amenorrhoea, oligomenorrhoea, weight gain, familial, Drug induced, and idiopathic Hirsutism. And those Patients who are willing to participate in the study with regular follow up cycles.

Exclusion criteria: It includes Tumours of ovaries and Adrenal glands, Adrenal hyperplasia (Congenital or late onset), Cushing's syndrome, HAIR-AN syndrome, Patients with HBsAg, HIV and VDRL positive, Known cases of tropical and infectious diseases, patients with known systemic diseases like cardiac, respiratory, renal disorders.

Laboratory Investigations: - It includes the routine investigations such as CBP to rule out Hb%, CUE to rule out any urine infection, RBS to rule out Diabetes, HIV I & II, HbsAg, VDRL to rule out any of these infection and special investigations to estimate hormonal changes in Hirsutism before and after study. It includes Serum Testosterone, DHEA'S, Estradiol (E2), TSH, FSH, LH, Prolactin and Ultra sonography of Abdomen and Pelvis to rule out the cause of Hirsutism.

The research studies show that there are elevated levels of testosterone and DHEA'S are associated with Hirsutism.

Clinical Trial Medicines: - After the careful study of Hirsutism and keeping in view the cause and pathology, research medicines were selected, formulated in Group A and in Group B standard control drugs were selected. Treatment was given as OP and IP basis.

In Group A coded medicines were prepared in decoction and powder form and given to the patients for 20 days from 5th day of menstrual cycle to 25th day in each cycle and has been repeated for next four consecutive cycles, and depilatory paste was prepared for hair removal when hair growth is present followed by hair growth inhibitor paste (zimad) is prepared and advised for regular application on hair removal areas for two times in each day regularly for 4 months.

In Group B the standard control drugs were selected in the form of tablet and cream, and given to patients tablet orally once in a day from 5th day of menstrual cycle to 25th day in each cycle and has been repeated for next four consecutive cycles, and cream is for local application on hair removal area for two times in a day for four months regularly. After four cycles of treatment with pre and post evaluation results were analyzed statistically for significant improvement of symptoms and signs and investigations. The results were analyzed by T-test, Chi Square test, Mean \pm SD (Standard Deviation) and Clinical based and tabulated in the form of tables and figures which are as follows.

1. Age: - Out of 20 patients in Group A, 5 patients i.e. 25% were 15-20 years old, 7 patients i.e. 35% were 21-25 years old, 5 patients i.e. 25% were 26-30 years old and 3 patients i.e. 15% were 36-40 years old. Where as in Group - B, 8 patients i.e. 40% were 15 to 20 years old, 5 patients i.e. 25% were 21-25 years old, 6 patients i.e. 30% were 26-30 years old and 1 patient i.e. 5% were 31 to 35 years. From the above data it is observed that highest incidence was in 13 patients i.e. 32.5% found to be in age group of 15-20 years and lowest incidence was in 3 patients i.e. 7.5% seen in the age group of 36-40 years. That mean hirsutism is common in young girls. Via vide table 1.

2. Marital Status: - Out of 20 patients in Group - A, 11 patients i.e. 55% was Un-Married and 9 patients i.e. 45% were married. Where as in Group - B, 10 patients i.e. 50% were Un-Married and 10 patients i.e. 50% were married.

From the above data it's observed that the highest incidence was 21 patients i.e. 52.5% found to be in Un-married girls in comparing to married women 19 patients i.e. 47.5%. In this present study it is observed that the un-married girls are more conscious for their health, beauty and social life. Via vide Table 2.

3. Socio-economic Status: - Out of 20 patients in Group A, 3 patients i.e. 15% were found to be of Low income group, 14 patients i.e. 70% found to be in Middle income group and 3 patients i.e. 15% were found to be in High Income group. In Group B, 2 patients i.e. 11% were found to be of Low income group, 15 patients i.e. 75% found to be in Middle income group and 3 patients i.e. 15% were found to be in High Income group.

From the above data it is observed that highest incidence of the disease is seen in middle income group 29 patients i.e. 72.5%, where as the lowest incidence seen in Low income group 5 patients i.e. 12.5% . Via vide table 3.

Research studies shows that Hirsutism is a life style disorder highly prevalent among middle and high income urban population as compare to rural population.

4. Temperament: - According to Unani concept of temperament patients were divided into 4 categories who was suffering from hirsutism. Out of 20 patients in Group A, 15 patients i.e. 75% were Balghami (Phlegmatic) Temperament, 2 patients i.e. 10% were Safravi (Bilious), 2 patients i.e. 10% were Damvi (Sanguine) and 1 patient i.e. 5% was Saudavi (Melancholic) Temperament. In Group B, 14 patients i.e.

70% were Balghami (Phlegmatic) Temperament, 2 patients i.e. 10% were Safravi (Bilious), 2 patients i.e. 10% were Damvi (Sanguine) and 2 patients i.e. 10% were Saudavi (Melancholic) Temperament. From the above data it is observed that the highest incidence of the disease is seen in Balghami (Phlegmatic) Temperament 29 patients i.e. 72.5%. Via vide Table 4. As per Unani concept Balghami Mizaj (Phlegmatic temperament) women have higher incidence to develop Hirsutism and amenorrhoea due to dominance of Phlegmatic humour.

5. Menstrual History: - As per the above study out of 20 patients in Group – A, 18 patients i.e. 90% were has irregular menses and 2 patients i.e. 10% were with regular menses. From 18 patients of irregular menses in Group – A, 15 patients i.e. 83.33% were has amenorrhoea, and 3 patients i.e. 16.66% were have amenorrhoea and oligomenorrhoea during menses. After 4 months of unani treatment it observed that 16 patients i.e. 88.88% were got regular menses with normal flow and 2 patients i.e. 11.11% were did not got regular menses.

Chi-Square(χ^2) - 25.313, $P < 0.0001$

In Group – B, 20 patients i.e. 100% were has irregular menses from which 14 patients i.e. 70% were have amenorrhoea and 6 patients i.e. 30% has oligomenorrhoea during menses. After 4 months of Modern treatment it observed that 17 patients i.e. 85% were got regular menses with normal flow and 3 patients i.e. 15% were did not got regular menses.

Chi-Square(χ^2) - 26.189, $P < 0.0001$

From the above data it's observed that Hirsutism is most common in women who have amenorrhoea. It also mentioned that in Unani classical books that Hirsutism is due to prolong amenorrhoea. And it's observed that the response of Group – A medicines is significant in comparison to Group - B medicines. Via vide Table 5.

6. Hair Pattern Distribution: - In this study assessment of hairiness is done by most common method which is widely used for the visual scoring of Hirsutism, this method is known as Ferriman Gallwey (1961) scoring system. This scoring system quantitates the hair growth in nine androgen-sensitive areas; each are given score 1 to 4, adding up to a total score of 36. Minimal = 1, Mild = 2, Moderate = 3, Severe = 4. The score of 6 is usually set as cut-off score for Hirsutism, whereas a score of 8 or more is considered as hirsutism. Score 8 to 15 indicate Moderate hirsutism and score above 15 is considered as severe Hirsutism.

From the above research data out of 20 patients in group – A, 9 patients i.e. 45% were terminal hairs on upper lip and chin, 7 patients i.e. 35% were terminal hairs on upper lip, chin and chest, 3 patients i.e. 15% were has terminal hairs on upper lip, chest and abdomen, 1 patient i.e. 5% was with terminal hairs on upper lip, chin, chest and abdomen. Whereas in group - B, 7 patients i.e. 35% were terminal hairs on upper lip and chin, 11 patients i.e. 55% were terminal hairs on upper lip, chin and chest, 2 patients i.e. 10% were has terminal hairs on upper lip, chin, chest and abdomen. From the above data it is observed that terminal hair growth is common on areas of upper lip, chin and chest. Via vide Table 6.

7. Ferriman Gallwey Score: - In present study the patients were scored as per the distribution of hair pattern on body area. In Group – A, 10 patients i.e. 50% were in Scoring of “8”, 5 patients i.e. 25% were in Scoring of “10” and 1 patient i.e. 5% was in scoring of “16”. And in Group – B, 8 patients i.e. 40% were in Scoring of “8”, 7 patients i.e. 35% were in Scoring of “10”, 3 patients i.e. 15% was in scoring of “12” and 2 patients i.e. 10% were in Scoring of “16”. In above data it is observed that 18 patients i.e. 45% have Scoring of “8” which considered as moderate hirsutism. Via vide Table 7.

8. PCOD:- From the current data out of 20 patients in Group – A, 18 patients i.e. 90% were associated with PCOD. In Group – B, 19 patients i.e. 95% were associated with PCOD. From the above data it is observed that Hirsutism is common in patients with PCOD. A recent study shows that 75% to 90% of women have hirsutism with PCOD. Via vide Table 8.

9. History of Hair removal: - In this study, out of 20 patients in Group – A, 15 patients i.e. 75% were have history of frequent hair removal and 5 patients i.e. 25% were have history of occasional hair removal. It is observed that patients were removing hairs not by single method but they use two or more techniques to remove their hairs as per convenience. Out of 20 patients, 5 patients i.e. 25% have the history of hair removal by waxing and threading, 4 patients i.e. 20% were used Veet cream and Scissors to remove the hairs, 5 patients i.e. 25% used thread and Veet, 2 patients i.e. 10% were used only threading method. Whereas 1 patient i.e. 5% was the history of hair removal by Scissor and threading, and 1 patient i.e. 5% was use scissor for hair removal and 1 patient i.e. 5% was used shaving and

threading. Out of 20 patients in Group –B, 16 patients i.e. 80% were have history of frequent hair removal and 4 patients i.e. 20% were have history of occasional hair removal. Out of 20 patients, 5 patients i.e. 25% have the history of hairremoval by waxing and threading, 2 patients i.e. 10% patients were used Veet cream and Scissors to remove the hairs, 3 patients i.e. 15% used thread and Veet, 3 patients i.e. 15% were used only threading method. Whereas 3 patients i.e. 15% was the history of hair removal by Scissor and threading, and 2 patient i.e. 10% was use shaving and 2 patients i.e. 10% were used Veet cream only.

From the above data it's observed that maximum patients were using the threading method for removal of hairs. Via vide Table 9.

10. Progression of Hairs (Before Treatment): - In the present study, in patient's hair progression history after hair removal is taken. Out of 20 patients in Group – A, 8 patients i.e. 40% were has a history of hair progression in 3-5 days, 6 patients i.e. 30% were has a history of hair progression in 6-8 days, 5 patients i.e. 25% were has a history of hair progression in 9-11 days, 1 patient i.e. 5% was has a history of hair progression in 12-14 days. out of 20 patients in Group –B, 6 patients i.e. 30% were has a history of hair progression in 3-5 days, 5 patients i.e. 25% were has a history of hair progression in 6-8 days, 4 patients i.e. 20% were has a history of hair progression in 9-11 days, 2 patients i.e. 10% were has a history of hair progression in 12-14 days, 3 patients i.e. 15% were has a history of hair progression in 15-17 days. From the above data it is observed that 14 patients i.e. 35 % have the history of hair progression in 3 – 5 days which was the highest incident rate. Via vide table 10.

Progression of Hairs (After Treatment): - In the present study, in patient's hair progression after treatment is observed that, Out of 20 patients in Group -A, 11 patients 55% were completely subsided terminal hairs, 4 patients i.e. 20% were has delayed hair progression as in 31- 40 days, 3 patients i.e. 15% were has delayed hair progression as in 41- 50 days, 2 patient i.e. 10% has delayed hair progression as in 51- 60 days. Out of 20 patients in Group -B, 10 patients i.e. 50% were completely subsided terminal hairs, 2 patients i.e. 10% were has delayed hair progression as in 31- 40 days, 4 patients i.e. 20% were has delayed hair progression as in 41- 50 days, 4 patient i.e. 20% has delayed hair progression as in 51- 60 days. Via vide Table 11.

CONCLUSION

Hirsutism is a common gynecological, endocrinological as well as dermatological and cosmetic, psychogenic disorder in women which is characterized by excessive growth of terminal hairs in women in a male distribution, specifically growth of midline hair over the upper lip, chin, chest, abdomen, back, linea alba and inner thighs. The present study was aimed to reduce the risk of Laser therapy for hair removal and to reduce the complication of Virilism. The selected drugs for the treatment of hirsutism shown excellent results with safe and very minimal side effects. Biochemical parameters were studied before and after treatment and it shows significant results. In this study the compound unani formulations which have actions like emmenagogue, diuretics, blood purifiers, depilatory, skin protective, hair growth inhibitor and Expectorant of Phlegmatic humour, were compared with standard control drugs and the result of compound unani formulation shows close to standard control drugs. After the study the subjective and objective parameters were assessed in comparing to be fore study and the results were drawn statistically to prove the efficacy of unani medicines in comparison with standard control drugs. The mean Therapeutic response was observed in Group A is 87.5 ± 15.17 (SD) and the mean Therapeutic response was observed in Group B is 87.5 ± 12.82 (SD), and the P value is extremely significant that is $P < 0.0001$. Both the groups have almost equal efficacy in the treatment of hirsutism. Both group A and Group B medicines are safe and patients well responded to therapy. The present clinical study on Hirsutism concluded that the similar efficacy of Compound unani formulations in comparing to standard drug and shows significant results $P < 0.0001$.

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