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Clinical Comparative Study Of Unani Formulation With Tab.Livogenin Iron Deficiency Anemia In Pregnancy [Dauran-E-Hamal]

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Abstract: *Anemia affects a third of the world's population and contributes to increased morbidity and mortality, decreased work productivity, and impaired neurological development. Understanding anemia's varied and complex etiology is crucial for developing effective interventions that address the context-specific causes of anemia and for monitoring anemia control programs. Recent work has furthered our understanding of anemia's complex etiology, including the proportion of anemia caused by iron deficiency (ID) and the role of inflammation and infection. Accumulating evidence indicates that the proportion of anemia due to ID differs by population group, geographical setting, infectious disease burden, and the prevalence of other anemia causes. Further research is needed to explore the role of additional nutritional deficiencies, the contribution of infectious and chronic disease, as well as the importance of genetic hemoglobin disorders in certain populations. The present study was conducted at Govt. Nizamia General Hospital for the period of 2yrs from 2016 – 2018 in ANC unit of Govt. Nizamia General Hospital. Present study also proves the efficacy of Unani medicine for improvement in Hb level.*

Keywords: *anemia, iron deficiency anemia, nutritional anemias, anemia of inflammation.*

INTRODUCTION

Anemia

Anemia is defined as hemoglobin concentration less than 12g/dl in non-pregnant women and less than 10g/dl during pregnancy or puerperium. It is the most common type of Anemia in pregnancy. Women with normal Hemoglobin levels but poor iron stores manifest as over "Iron Deficiency Anameia During Pregnancy". The centers for disease control and prevention (1990) defined anemia as less than 11g/dl in the first and third trimester and less than 10.5g/dl in the second trimester. 25-65% incidence of anemia in developing countries and 10-20% incidence in developed countries with the age of 20-45 years Females.

The modest fall in hemoglobin levels during pregnancy is caused by a relatively greater expansion of plasma volume compared with the increase in red cell volume. The disproportion between the rates at which plasma and erythrocytes are added to the maternal circulation is greatest during the second trimester; iron deficiency is often manifested by an appreciable drop in hemoglobin concentration. In the third trimester, additional iron is needed to augment maternal hemoglobin and for transport to the fetus. The maternal need for iron averages close to 300mg-800mg for the fetus and placenta and 500mg available, for maternal hemoglobin mass expansion. Approximately 200mg more are shed through the gut, urine, and skin. The total amount (1000mg) considerably exceeds the iron stores of most women and results in iron deficiency anemia. The amount of iron diverted to the fetus is similar in

a normal and in an iron- deficiency mother; the newborn infant of a severely anemic mother does not suffer from iron- deficiency anemia. Bodnar and associates (2001) studied a cohort of 59,248 pregnancies and found a prevalence of 27%for postpartum anemia. Although this was strongly correlated with prenatal anemia, it was found 21% of women with normal prenatal hemoglobin levels. The specific cause of anemia is important when evaluating effects on pregnancy outcome that is iron deficiency anemia. Most studies of the effects of anemia on pregnancy, describe large population. The risk periods when the patient may even die at about 30-32 weeks of pregnancy, during labour, immediately following delivery, anytime in puerperium specially 7-10 days following deliveries due to pulmonary embolism. This likely deal with nutritional anemia and specifically those due to iron deficiency. Klebbanoff and co-workers (1991) studied nearly 27,000 women and found a slightly increased risk of preterm birth with midtrimester anemia, low birth weight babies with its incidental hazards, intrauterine death due to severe maternal anoxemia. Lieberman and colleagues (1987) found an association with low hematocrit and preterm birth in black women. Anemia may be associated with fetal growth. The centers for disease control and prevention (1989) estimated that about 8 million American women of child bearing age were iron deficient. According to world health organization,

Anemia contributes to 40% of maternal deaths in third world countries (viteri, 1994).

In the present scenario anaemia is the most common problem among the women during pregnancy as a result in the deficiency of iron and nutrition disorder. Theat-first paradoxical findings were that ironically, healthy women with higher hemoglobin concentration a real soat increased risk for adverse pregnancy outcome. Murphyand colleagues (1986) described over 54,000 pregnancies in the Cardiff birth survey and reported excessive perinatal morbidity with high maternal hemoglobin concentration. Scanlon and associates (2000) studied the relationship between maternal hemoglobin**.** Levels and preterm or growth-restricted infants in 173,031 pregnancies. Women whose hemoglobin concentration was three standard deviations below the mean at 12 weeks had a 1.7-fold risk of preterm birth.

The long-used term physiological anemia to describe this process is anoxym or on and should be discarded. Late in pregnancy, plasma expansion essentially ceases while hemoglobin mass continues to increase. The frequency of anemia during pregnancy depends primarily on iron supplementation. It is more common among indigent women. Taylor and associates (1982) reported that hemoglobin levels at term averaged12.7g/dl among women who took supplemental iron compared with 11.2g/dl for women who did not.

I. Causes According to Unani Concept:

- Amraaz-e-kabid (Liver Disorders)
- Amraaz-e-Meda wa Amaa (Gastrointestinal disorder)
- Amraz-e-kuliya (Renal Disorders) eg:haematuria
- Amraz-e-sadar (cardio-pulmonary diseases) eg:haemoptysis
- Mufarreqat (Miscellaneous) eg:nuqs-e-taghzia (malnutrition)
- Gareebi wafaqa (poverty & starvation)
- Ghairmamooli mehnat wa riyazat (extreme exertion and exercise)
- Shadeed jiryan-ud-dam (severe haemorrhage)
- Baddhazmi (dyspepsia)

II. Nishaniya & Alamath (Sign and symptoms: According to Unani Concept):

- Face and body discolouration from white to yellowish colour
- Oedemaon eyelids, face, legs are seen specially in early morning
- Teeth impression on tongue is present
- Altered pulse sometimes fast, regular, feeble, disturbed sleep, weakness, lazyness, stomatitis, white nails etc.

- Difficulty in healing wound, palpitation, giddiness, hypothermia and sometimes leucorrhoea

III. Materials and Methods:

Hundred cases were recorded in the premises of the Government Nizamia General Hospital, Charminar ANC Ward No:7 with clinical features of anaemia were registered for the screening for iron deficiency anaemia in pregnancy during the period of 2016 – 2018. According to criteria of selection (inclusion and exclusion criteria) and also lab investigation. Out of 100 cases, 60 cases were screened and selected for clinical trials, who had given their consent. Comparative study in between two groups GROUP A and GROUP B.

Group 'A' 30patients treated with selected Unani medicines and group 'B' 30 patients are treated with tablet livogen(ferrous fumarate). All the patients are selected on the basis of detailed history, clinical examination (general, systemtic and obstetrics), the details were recorded in the proforma.

Study Design: A study will be standardrandomized single blind control study **Study Plan:** Two groups are planned for the study GROUP A and GROUP B **Sample Size:** Total 60 patients, 30 in each group.

Parameters Studied:

a) SubjectiveParameters:Historyofgiddiness,palpitation,weakness,fatique,oedema on face and limbs, Anorexia, Pallor conjuctiva, sclera, tongue and skin, Angular stomatitis, koilonychias.

b) Objective parameters: Assessment by Clinical examination and by investigation.

IV. Criteria For Selection of Patients:

a) Inclusion criteria:

- All the antenatal patients who are having anemia
- Hb% (10 gm or less than10 gm more than 7gm)
- All age group both primi and multigravida
- Gestational age between 20-34wks.

b) Exclusion Criteria:

- Patients who are having other associated diseases with Anemia
- Patients with severe oligohydramnios
- Un-cooperative patients

V. Method of Selection of Drugs:

According to ancient physician the anaemia (faqr-ud-dam). Caused by weakness of liver (due to cold intemperament) and stomach. Due to this the liver unable to produce Healthy blood and it gets altered its five powers.

- Quwat-e-hazima(digestivepower).
- Quwat-e-jaziba(attractivepower).
- Quwat-e-dafiya(deficativeandexpulsivepower).
- Quwat-e-masika(retensivepower).
- Quwat-e-mumaiyyaza(identicalpower).

The literary survey and the clinical study of iron deficiency anaemia with special references to positive factors and its management were carried out the drugs were selected according to su-e- mizaj,impairedhumours,zof-e-meda-o-jigaranddrugswereselectedonthebasisofmodeofaction of the drugs which are more effective in Hb% evaluation and RBCs formation. Overall nutritious, digestive, contains vitamin-c and iron drugs were selected for better absorption.

VI. Method of Preparation of Drugs and Administration:

The drugs for clinical and therapeutically trial were selected on the basis of Unani medicine and allopathic medicine. All the Unani drugs were cleaned with all its impurities and grinded to fine powder and make a rubb and qiwam. The drug and dosage

Group A:

1) Group A will be treated for Iron Deficiency Anemia in pregnancy by Unani formulation in the form of Majoon.
2) Orally

NUSQAE MAJOON (1kg):

1) AMLA (Emblica Officinalis)-100gms
2) PAMBADANA(Gossypium)-100gms
3) ELACHIKHURD (Eleharia cardamomum)-50gms
4) RUB-E-ANAR (Punicagranatumlinn)-50gms
5) RUB-E-TAMATAR (Lycopersiumesculentum)-50gms
6) KHAND-E-SIYA(Caryotaurens, jaggery)-double of all ingredients

Method: Fine powder of all 1,2,3 and make the qiwam from KHAND-E-SIYA and add the powder and RUBS in the qiwam and mix them well.

DOSAGE: 5 gms bd (after meals) Group B:

- Tab.LIVOGEN (Ferrous fumarate 152 mg+Folic acid 1500 mcg)
- 2 Tablets bice (bd) daily

Source of Data:

- OP & IP units of Government Nizamia Tibbi College & General Hospital, Charminar, Hyderabad, Telangana.

Place of study: Department of Qabalath-O-Amraaz-e-Niswan, OP & IP units of Government Nizamia Tibbi College & General Hospital, Charminar, Hyderabad, Telangana.

Duration of the Study: 18 months

Duration of Treatment:

- 3 cycles with each an interval of a month in Group A patients
- The period of treatment will be 30 days in each cycle

VII. Pharmacognosy of Drugs.

Table 1: Pharmacognostic drugs with Chemical constituents and Therapeutic actions

Name of Pharmacognosy Drugs	Chemical constituents	Therapeutic action and uses
Aamla[Fruit] **Botanical Name:** Emblica officinalis Family: Euphorbiaceae	calories,vitC,iron,tannin, galic acid, glucose etc.	Qabiz, habis, musakin-e-hararath, mufareh,mushtahi,muqawwi-e-Aaza-e-Raisa, muqawwi-e-meda, muqawwi-e-chasham,muqawwi-e-shaar,mana-e-tabqeer,mudir-e-baul,muqawwi-e-aasab
Anar(fruit) Botanicalname: Punica GranatumLinnFamily [punicaceae]	Chemicalconstituents: Glucose,Sugar,Calcium, Phosphorous, Iron etc	Rindoffruit:Astringent Fruit:Laxative,usedininflammationof stomach and heart. Seeds: Stomachic
Jaggery(Khand-e-siyah) BotanicalName: Caryotaurens	**Chemicalconstituents:**50 % Sucrose, 20 % Invert sugar,20%moisture,Iron andsomeinsoluablematter such as wood ash, protein, bagassefibres	Appetizer, anti-inflammatory, drug purifier,laxative,digestive,andusedin preparation of majoon & jawarish.

Ilaychi-e-khurd/mayeen khurd Botanical Name: Elettaria Cardamomum linn **Family:** Tamaraceae	Glycosides,steroids,tannin, flavonoids, sodium, potassium	Headache, bad humours of the liver, seeds used as a condiment in cordial, bitter,Fruit-agentflowers asa flavoring & in perfumery, carminative, aromatic, stimulant&diuretic
Pambadana Botanicalname: Gossypium herbaceum linn Family: Malvaceae	Organic: Glycosides, steroids,resins,saponius, carbohydrates,proteins&phenoliccompounds. /tannins.Inorganic:Sodium, Potassium,Iron&Calcium	Itisusedforsual[cough],zeequnnafas [asthama] & Zof-e-bah [sexual weakness]
Tomato Botanical name: Solanum Lcopersicum Family: Solanaceae	Water–95%, Carbohydrates–4%,Fat& protein1%,Iron27mg/100 gms(4%),VitA-42µg,B1 Thiamine 0.037mg(3%) B3 Niacin-0.594 mg (4%) B6-0.08mg (6%)	Appetizer, Relaxant, Correct Anemia

Medicine Prescribed for Clinical Trials Drugs Given for Both 'A' and 'B' Group Patients: Drugs given for group 'A' patients

1) AMLA (Emblica Officinalis)
2) PAMBADANA(Gossypium)
3) ELACHIKHURD (Eleharia cardamomum)
4) RUB-E-ANAR (Punica granatumlinn)
5) RUB-E-TAMATAR (Lycopersium esculentum)
6) KHAND-E-SIYA (Caryotaurens, jaggery)

Drugs given for group'B' patients

Tab.LIVOGEN (Ferrous fumarate)

Ferrous Fumarate:

It is a type of iron also known as iron fumarate. It is the iron salt of fumaric acid occurring as a reddish orange powder.

Othername: Feostat, iron fumarate Colour:Reddish orange Odour:Odorless

Density:2.435g/cm^3(20C^0) Solubility: Slightly soluable Chemical formula:$C_4H_2FeO_4$ Chemical structure:

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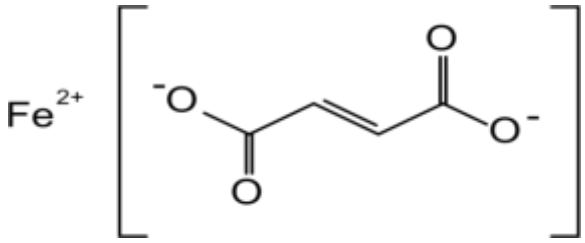

Uses: To treat iron deficiency anaemia (a lack of red blood cells caused by having too little iron in the body).
Indication: Correction of anaemia
Contraindication: Iron overload syndrome Thalassemia: Hyperemesis, gravidarum
Side-effects: Allergic reaction like swelling on face, lips, tongue and throat Difficulty in breathing, chest pain, constipation, diarrhea, nausea, vomiting, heart burn, loss of appitite, black and dark coloured stool.
Dosage: 600mg/day (200 mg/day elemental iron) divided by 1 –3 times per day.

Observation Statistical Analysis and Result of Clinical and Therapeutic Study

Table 2: Distribution of Iron Deficiency Anaemia Patients according to age

Sr. No.	Age in Group	Group A	Percentage	Group B	Percentage
1	18 – 20	6	20	9	30
2	21 – 25	16	53.33	14	46.67
3	26 – 30	7	23.33	5	16.67
4	31 – 35	1	3.33	2	6.67
5	36 – 40	--	--	--	--
	Total	30	100	30	100

This table shows:

The mean maternal age is considered as 18–40 years (n=60), among 30 women's 53.33% in group 'A' and 46.67% in group 'B' are in age of 21 – 25.

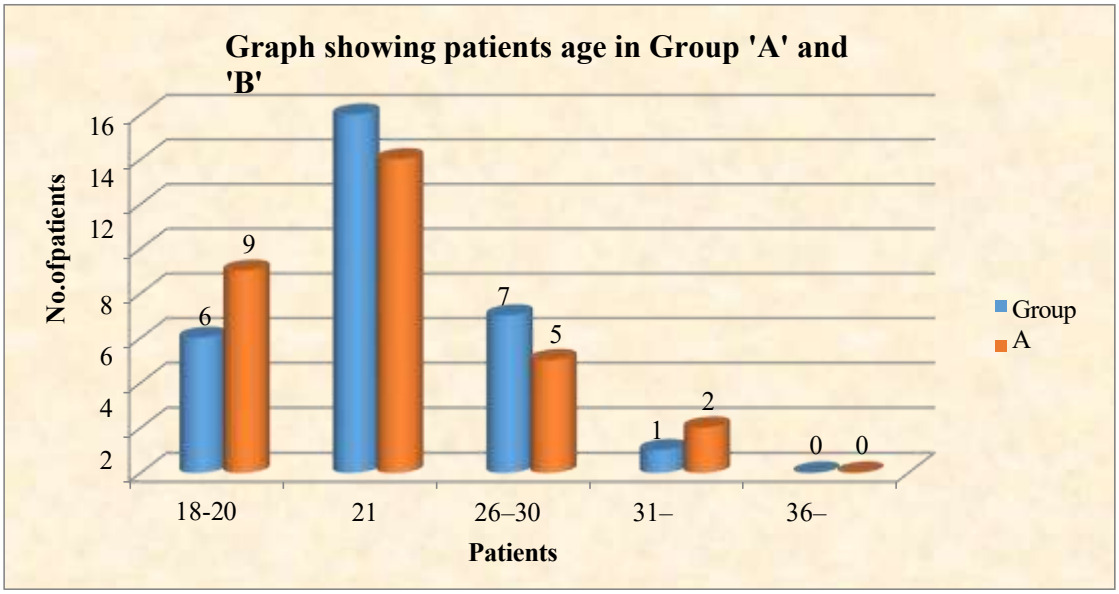

Table 3: Distribution of the Patients according to Gravida A & B

Sr. No.	Gravida	GroupA	Percentage	GroupB	Percentage
1	Primi	6	20	13	43.33
2	2nd gravid	9	30	6	20
3	Multigravida	15	50	11	36.67
	Total	30	100	30	100

This table shows:
Among 30 women in each group, gravidity is 50% in group 'A' as multigravida and 43.33% in group 'B' as primi gravid.

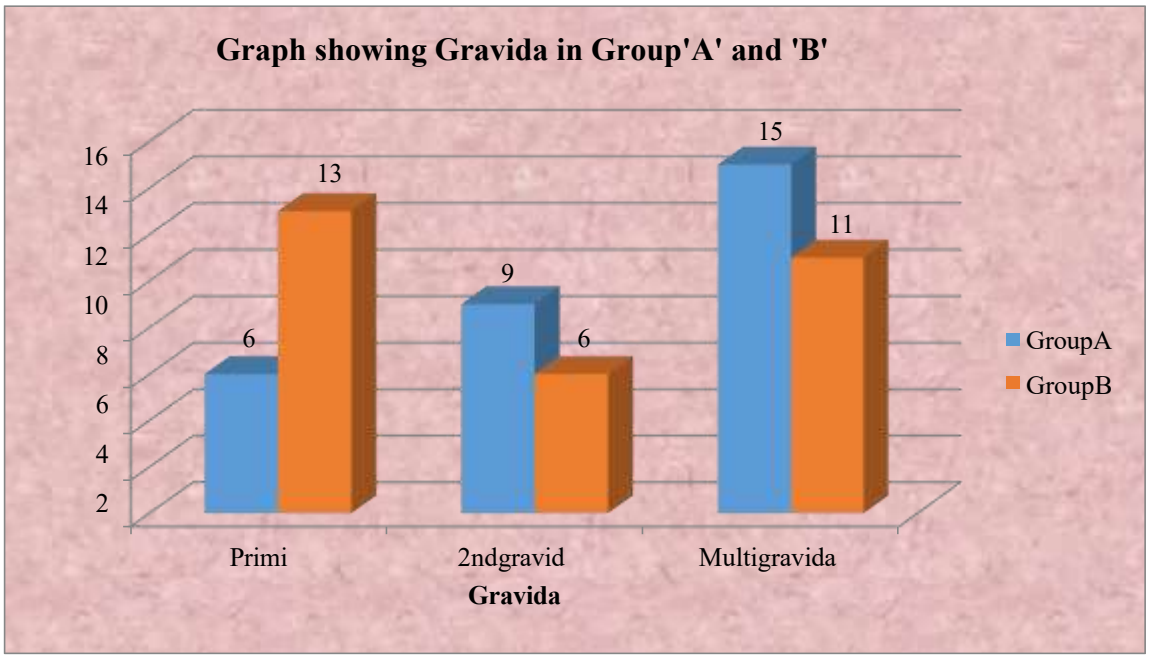

Table 4: Distribution of the Patients according to Gestational Age

Sr. No.	Gestational age in weeks	Group A	Group B	Total	Percentage
1	18 – 20	1	1	2	3.33%
2	21 – 24	6	10	16	26.67%
3	25 – 28	12	8	20	33.33%
4	29 – 32	9	10	19	31.67%
5	33 – 34	2	1	3	5%
	Total	30	30	60	100%

This table shows:

- The incidence is more common in gestational age of 25–28weeksi.e.,33.33%
- In the gestational age of 21–24 weeks the incidence is 26.67%
- In the gestational age of 18–20 weeks the incidence is not seen probably (3.33%) very few patients come to antenatal care of outpatient department before 5 months of pregnant.

- In the gestational age of 29–32 weeks the incidence is 31.67%. In Govt.Nizamia General Hospital Hyd. As they had good antenatal care during the first half of pregnancy.

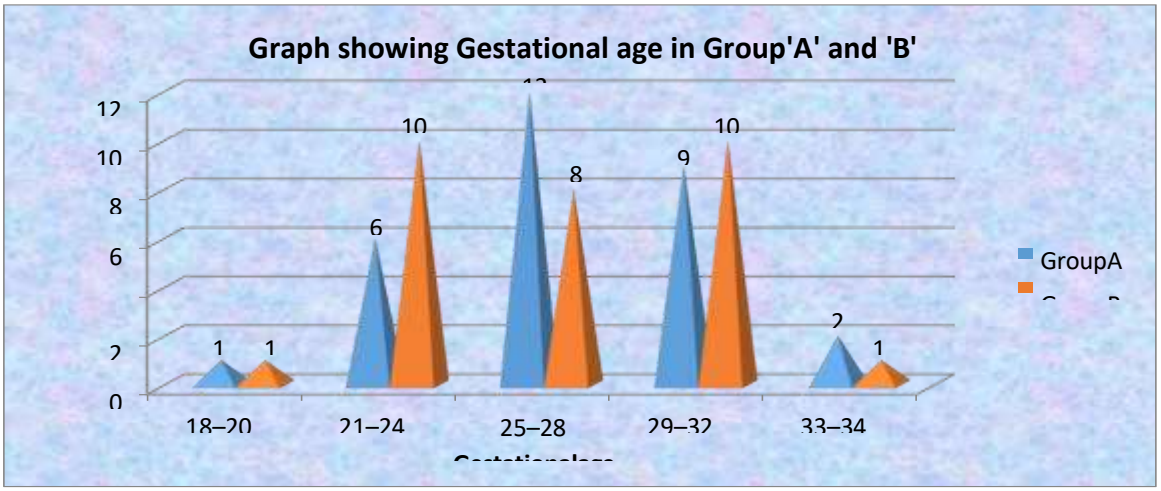

Table 5: Distribution of the Patients according to Socio-economic status

Sr. No.	Socio-economic status	Group A	Group B	Total	Percentage
1	Upper	--	--	--	--
2	Middle	21	20	41	68.33%
3	Lower	9	10	19	31.67%
	Total	30	30	60	100%

This table shows:

- 68.33% of patients belong to middle socio-economic status.
- 31.67% of patients belong to lower socio-economic status.
- Number of patients belongs to upper socio-economic status is nil.

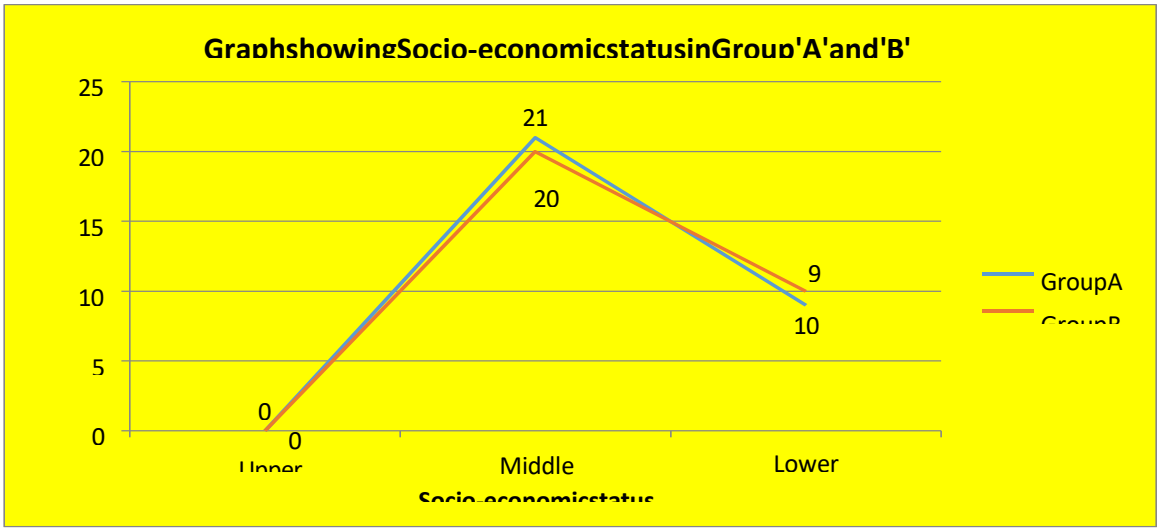

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Table 6: Distribution of the Patients according to Residence Habitation

Sr. No.	Residence habitation	Group A	Group B	Total	Percentage
1	Rural	5	4	9	15%
2	Urban	10	6	16	26.67%
3	Slum	15	20	35	58.33%
	Total	30	30	60	100%

This table shows:

- In slum 58.33 % according to residence habitation.
- 26.67 % urban according to residence habitation.
- 15 % rural according to residence habitation.
- This shows the incidence of anaemia is high in slum habitation among all type of habitations.

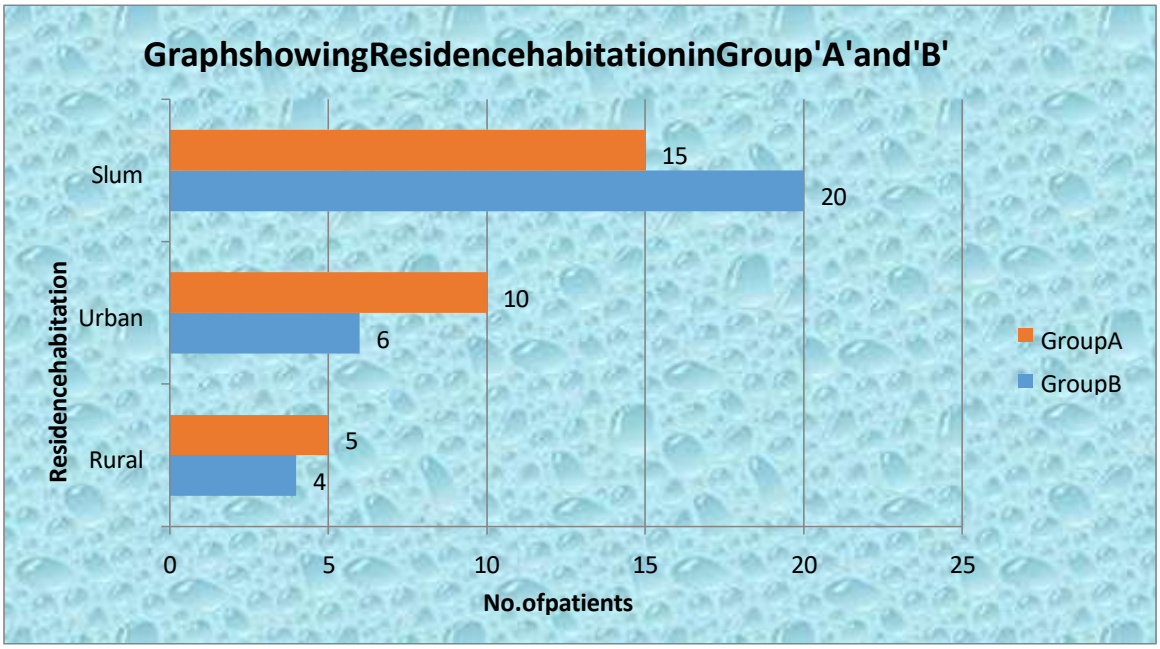

Table 7: Distribution of the Patients according to Temperament

Sr. No.	Temperament	Group A	Group B	Total	Percentage
1	Damavi	1	--	1	1.67
2	Safravi	--	1	1	1.67
3	Balghami	19	21	40	66.67
4	Saudavi	10	08	18	30
	Total	30	30	60	100

This table shows:

More number of patients belong to Balghami temperament 58% (29) followed by saudavi 22% (11), safravi 8% (4) and Damavi 12% (6). This shows domination of Balghami in the body isthe root cause of anaemia.

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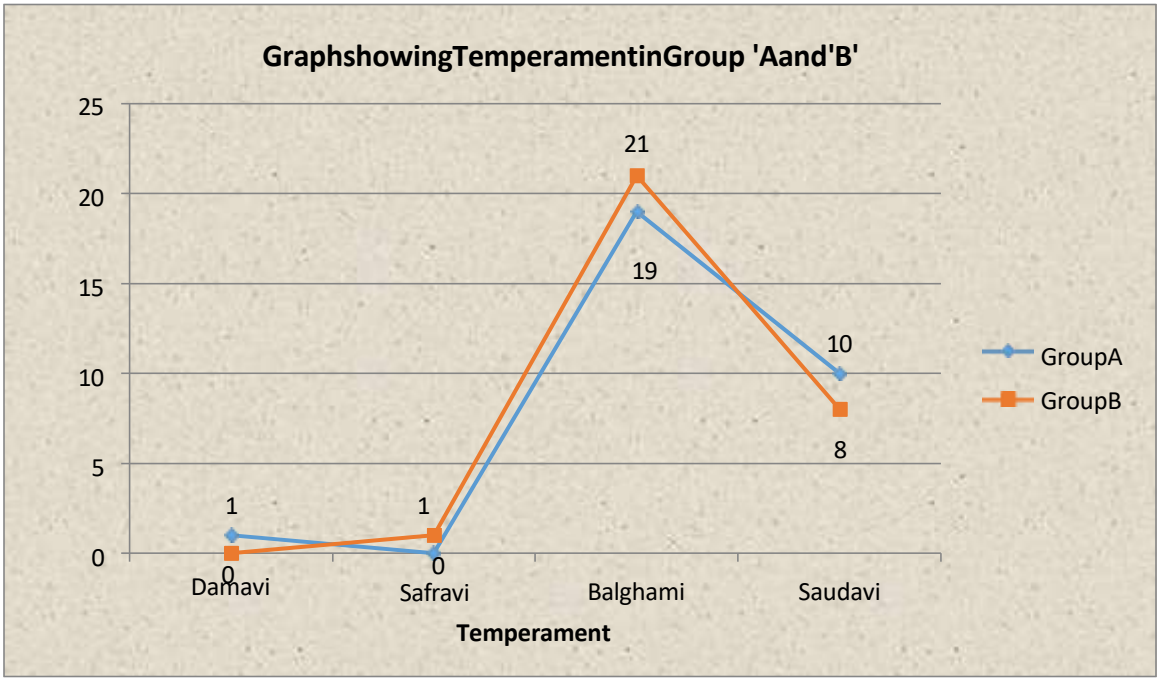

DISCUSSION

The present dissertation is undertaken with the title "Clinical Comparative Study of Unani Formulation with Ferrous Fumarate (Tablet Livogen) In Iron Deficiency Anaemia In Pregnancy [Dauran-E-Hamal]" to scientifically evaluate the efficacy of Unani medicine in iron deficiency anaemia and compare it with tab.Livogen. Primary goal of anaemia in pregnancy asstated in WHO guide lines for anaemia, is to improve the haemoglobin percentage during pregnancy and give freshness, feeling of wellbeing and psychological satisfaction to the patients. According to literary review of Unani medicine regarding anaemia in pregnancy, the including medicines are those which shows the properties of cardiac and livertonics, digestive nutritive, rich iron content and hematinics. Based on the long-term experiences and good results, cited in kitab "Shareh-e- Asbab" by Hakeem Kabir Uddin, kitab "Haziq" by Hakeem Ajmal Khan, standardization of single drugs by CCRUM New Delhi part-III and the Unani pharmacopoeia of India part-I volume-I New Delhi. The Unani medicines are selected for anaemia in pregnancy in group 'A'. Unani medicines Amla, Heel-Khurd, Pambadana, Anar, Tomato and Khand-e- siyah are contain iron, vitamin 'C', calcium and some of digestive properties. Thus, after clinical clearance from institutional ethical committee, an attempt is made to scientifically prove the efficacy of Unani medicine in iron deficiency anaemia with the aim to improve haemoglobin level in comparison to ferrous fumarate (tablet livogen) (ferrous fumarate). Sample size of 60 married women with aged 18–40 yrs with low Hb % who are admitted for anaemia during pregnancy are randomly selected for clinical study. 30 women are treated with group 'A' (coded Unani) medicines and 30 women are treated with group 'B' (Livogen) medicine. Both the groups are treated by oral route, in the form of oral tablet and Majoon. After food bice a day 5 gms (BD) for 3 months, if required. If patients did'nt respond to group 'A' and 'B' they went for orofer infusion and blood transfusion. Indication for iron deficiency anaemia in pregnancy is low Hb % not less than 6 gm% anaemic, all age group, both primi and multigravid with 20–34 weeks of gestation. Patients who are having other associated diseases with anaemia, with severe oligohydramnios and uncooperative patients are excluded in this clinical study. The primary outcome measures are the response from start to end of the treatment during 3 months of course. Overall successful result for anaemia in pregnancy with Unani medicine is 100 % as well as with ferrous fumarate (tablet livogen) is 83.33%. The base line data of the study population compared in both groups are maternal age, gravidity, socio-economic status, residence habitation, gestational age and haemoglobin percentage. Statistical analysis is done for the patients in improvement of Hb% and duration of the treatment.

Statistical Procedure:

The statistical procedures used for analysis of the already known information of the research problems are as follows

- Unpaired t-test is applied to know the statistical significance i.e., mean±S.D (Standard Deviation).
- X^2–test is applied to know the statistical significance p-value.

Results on continuous measurements are presented as mean± S.D and categorical measurements are presented in number (%).

Statistical Analysis: With reference to table no.1 the maternal age: (group 'A' and 'B')

The base line data, the mean maternal age is considered as 16 – 35 yrs maximum number of patients are in the age of 21–25 yrs, (n = 60). Among 30 women 53.33% in group 'A' and 46.67% in group 'B' are in the age of 21–25yrs. Whereas 20 % in group 'A' in the age of 18–20 yrs and 30% in 'B' group. 26–30 yrs old with 23.33 % in group 'A' and 16.67 % in group 'B'. 31–35 yrs old with 3.33% in group 'A' and 6.67% in group 'B'. In this study, the maternal identical age was 21–25 yrs old. As cited in table no.1.

With reference to table no.2

The Gravidity: (group 'A' and 'B')

Among 30 women in each group, gravidity is 15 cases (50%) as multigravida, 9 cases (30%) 2nd gravia and 6 cases (20%) as primi gravida in group 'A' and 11 cases (36.6%) as multigravida, 6 cases (20%) 2nd gravia and 13 cases (43.3%) as primigravida in group 'B'. As cited in table no.2.

With reference to table no.3

The gestational age: (group 'A' and 'B')

- The mean gestational age is 17–36 weeks.
- The incidence is more common in gestational age of 25–28 weeks i.e., 12 cases 40% in Group 'A' where as 8 cases 26.6% in Group 'B'.
- In the gestational age of 21–24 weeks the incidence is 6 (20 %) cases in Group'A'and 10 (33.3%) in Group 'B'.
- In the gestational age of 17 –20 weeks the incidence is not seen probably (3.3%) very few patients come to antenatal care of outpatient department before 5 months of pregnant.
- In the gestational age of 29–32 weeks the incidence is 9 (30%) cases in Group 'A' and 10 (33.3%) in Group 'B' patients.
- 33–36 weeks of gestation 2 (6.6 %) cases are seen in Group 'A' and only 1 (3.3%) case in Group 'B' patients.
- In Govt. Nizamia General Hospital Hyd. As they had good antenatal care during the first half of pregnancy. As cited in table no.3.

With reference to table no.4

The socio-economic status: (group 'A' and 'B')

- 21 (70 %) cases in group 'A' and 20 (66.6 %) cases in group 'B' patients belongs to middle socio-economic status.
- 9(30%) cases in group 'A' and 10 (33.3 %) cases in group 'B' patients belongs to lower socio-economic status.
- Number of patients belongs to upper socio-economic status is nil.
- The conducted study shows high incidence rate with middle class in Group 'A' and 'B' patients with total 41 cases (68.3%) common in iron deficiency anaemia in pregnancy. As cited in table no.4.

With reference to table no.5

Residence habitation: (group 'A' and 'B')

- In group 'A' 15 (50 %) cases and in group 'B' 20 (66.6 %) cases in slum habitation according to residence habitation.
- In group 'A' 10 (33.3 %) cases and in group 'B' 6 (20 %) cases in urban habitation according to residence habitation.
- In group 'A' 5 (16.6 %) cases and in group 'B' 4 (13.3 %) cases in rural habitation according to residence habitation.
- This conducted study showed the incidence of anaemia is high in slum habitation among all type of habitations.

As cited in table no.5.

- With reference to table no.6

Temperament: (group 'A' and 'B')

- More number of patients belongs to Balghami temperament. In group 'A' 19 (63.3%) cases and in group 'B' 21(70%) cases with total40 cases are seen with Balghami temperament.
- Saudavi temperament in group 'A' 10 (33.3 %) cases and in group 'B' 8 (26.6 %) cases with total 18 cases are seen.
- Safravi temperament in group 'A' no patient and in group 'B' only 1 (3.3 %) case is seen and
- Damavi temperament in group 'A' only 1 (3.3 %) case with no cases in group 'B' are seen.
- This shows domination of Balghami temperament in the body is the root cause of anaemia. As cited in table no.6.

SUMMARY AND CONCLUSION

- Present dissertation "clinical comparative study of unani formulation with ferrous fumarate (tab. Livogen) in iron deficiency anaemia in pregnancy [dauran-e-hamal]" proves Unani medicine is effective for anaemia in pregnancy.
- The present study was conducted at Govt. Nizamia General Hospital for the period of 2 yrs from 2016–2018 in ANC unit of Govt. Nizamia General Hospital.
- Present study also proves the efficacy of Unani medicine for improvement in Hb level
- Sample size of 60 women, where maximum number of cases, the age group of 18–40 yrs and with high incidence of iron deficiency anaemia approximate 26 – 28 weeks of gestation and common in multiparous women with low and middle socio-economic group.
- 30 women are treated with Group–A medicine (coded Unani medicine) and 30 women are treated with Group–B medicine (Ferrous fumarate (tablet livogen).
- Causes of iron deficiency anaemia: the patients were study history of Amoebic Dysentry, Abortion, Antipartum Haemorrage, Bleeding piles, Injury, Bleeding Gum, Epistaxis.
- Most of the patients are studied with complaints of pall or, pedal oedema, anorexia, palpitation and dyspnoea.
- Most of the patients are considered anaemic with balghami and saudavi mizaj. In this study most of the patients are belongs to slum area.
- The duration of illness is noted mostly by 7-10 days with complaints and sign and symptoms.
- During the study most of the patients were recorded Hb % between 8-9 gm % haemoglobin.
- Most of the patients having 26–30 volume PCV and 3–4 mil RBC during treatment of anaemia.
- The duration of treatment was 3 months with chronicity of 1 month with 10 days admission. All patients among 60 are showed good response to group–A and group–B.
- In Group–A cure rate/response is high than Group–B.
- In Group–A cure rate is 86.67 % where as in Group–B cure rate is 53.33 %.
- The study showed improvement in mean (± S.D) Hb % is high in group 'A' medicine than group 'B' medicine.
- The study showed improvement in mean (± S.D) RBC is high in group 'A' medicine than group 'B' medicine.
- The study showed improvement in mean (± S.D) PCV is high in group 'A' medicine than group 'B' medicine.
- The comparative study of management between group 'A' and 'B' is present with good

response in group 'A' management than group 'B'.

- Improvement in Hb % is high in treating group 'A' than group 'B'.
- Most of the cases are cured in duration of 30–40 days of treatment in group 'A' and 'B'
- Most of the cases showing good result with Unani medicine in group 'A' with short duration treatment.
- Very least 1 % cases were gone for roofer and blood transfusion in group 'B' patients.
- After deep clinical study of anemia during pregnancy we come to the conclusion that iron deficiency anemia in pregnancy is more common among the low social economic group with multiparity of women's can be treated successfully by Unani medicines which are cheap, low cost, more effective without side effect and affordable range. It has no adverse effect like allopathic medicines.
- Unani medicines give strength to liver, stomach and increased the rate of absorption and improved/ produced good blood formation.
- Both groups medicine contain iron in its composition which is easily digestible hepatoprotective, hepatotonic and hematenic action with rich of Vitamin C, calcium, $B_6$and B_{12}.
- Group'A'medicines found to be beneficial and proved harmless through the course of treatment. Continuous use is also harmless to the patient during the treatment and also can be used in all age groups and in all seasons.
- Keep the organs healthy and maintain the body temperament and mizaj.
- The result of group 'A' medicine is more effective and shows the average response of 86.67 % where as in group 'B' response of 53.33 %.
- At the end the clinical work were proved that the both groups are showed good/ excellent results.
- Group 'A' showed good/excellent result than group 'B'.
- Finally, the patients were satisfied with group 'A' medicines than group 'B' medicines.
- The comparative study of group 'A' is better than group 'B'.

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