



**INTERNATIONAL JOURNAL OF NOVEL RESEARCH
AND DEVELOPMENT (IJNRD) | IJNRD.ORG**
An International Open Access, Peer-reviewed, Refereed Journal

THE CLINICAL STUDY OF IRON DEFICIENCY ANAEMIA [FAQR-UD-DAM BA WAJAH ZOAF-E-JIGAR] AND ITS MANAGEMENT WITH UNANI MEDICINE.

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ABSTRACT- FAQR-UD-DAM is an Arabic word which means shortage of blood. Soo-ul-qinya means alteration or deficiency in storage, attributing to iron deficiency anaemia [IDA]. Anaemia [lack of blood] is a worldwide public health issue affecting approximately 1.62 billion sufferer or approximately quarter of world population. Among anaemia IDA is most widespread and most common nutrient deficiency. It generally occurs when iron demand of the body is not met by iron absorption. IDA may be caused by deficient intake or absorption, excessive demand, repeated pregnancies or deficient utilization.

Some Unani physicians have described anaemia as Zoaf-e-Jigar [weakness of liver]. They believed that alteration in the temperament of liver causes its weakness which leads to anaemia. Anaemia is the most prevalent deficiency disease and one of the major nutrition related goals globally. Unani medicine plays a vital role in the management of anaemia through its safety, efficacy and easy availability. This overview has been contemplated to highlight the beneficial aspect of Unani medicine in the management of anaemia.

Aims and Objectives: To evaluate the efficacy and safety of unani formulation in the management of anaemia [Faqr-ud-Dam Ba Wajah Zoaf-e-Jigar].

Methodology: The study was conducted as single blind clinical trial to evaluate the safety and efficacy in iron deficiency anaemia [Faqr-ud-dam ba wajah zoaf-e-jigar] with polyherbal Unani formulation. The sample size of 40 patients were taken. All these patients received treatment for

90 days. Medicines [Gul-e-Surkh, Badiyan, Parsiaoshan, were given in safoof [powder] form 2 gm each, alongside honey [1-2 teaspoon] morning and evening daily with Maweez Munaqqa 1.5 gm before meals with proper follow-up at the interval of 15 days. The pre and post-treatment effect were then assessed based on subjective and objective parameters.

Results and Conclusion: The study revealed that the drug showed great response in subjective parameters like pallor, fatigue and palpitation. The objective parameters like Hb and Serum Ferritin also showed statistically extreme significant difference [$p < 0.0001$]. No adverse effect or toxicity was observed during clinical trial.

Key word: Iron deficiency anaemia, Soo-ul-qinya, Zoaf-e-jigar, Gul-e-Surkh [Rosa centifolia], Badiyan [Foeniculum vulgare], Parsiaoshan [Adiantum capillus-veneris], Maweez munaqqa [Vitis vinifera].

LIST OF ABBREVIATIONS

A: Absent

AD: Anno Domini (after the birth of christ)

BC: Before Chris

BT: Before Treatment

AT: After Treatment

SES: Socio-economic status

L/C: Low Class

M/C: Middle Class

U/C: Upper Class

D: Days

Dr: Doctor

WHO: World Health Organization

Hb: Haemoglobin

CBP: Complete blood picture

ESR: Erythrocyte sedimentation rate

LFT: Liver function test

e.g: example grati (for example)



i-e: idest (that is)

INTRODUCTION

ANAEMIA can be literally defined as low level of haemoglobin in the blood. Haemoglobin is the protein present on the surface of RBC's and they are responsible for carrying oxygen in blood. It's a worldwide health issue affecting 1.62 billion people³⁷ it means quarter of the world population in both developed and developing countries. Unani Physician has discussed iron deficiency anaemia under the heading of FAQR-UD-DAM, SOO-UL-QINYA, KAMI-E-KHOON, FASAD-E-KHOON etc⁴⁶. term FAQR-UD-DAM was coined in 20th century. It's an Arabic word which literally means shortage of blood. SOO-UL-QINYA stands for fault in treasure house, here liver is an organ referring as treasure house of the body. They both are the qualitative and quantitative disturb condition of blood causing inability in catering the corporal physiological functions of body.

WHO has estimated that approximately 2 billion people suffers from anaemia every year out of which 50 percent of cases are alone due to iron deficiency anaemia which is considered one of the important nutrient deficiencies

AIMS AND OBJECTIVES

Present study of FAQR-UD-DAM BA WAJAH ZOAF-E-JIGAR is design with following aims and objectives.

1. Aim of the study is to evaluate the safety of Unani Drugs in management of FAQR-UD-DAM [iron deficiency anaemia].
2. To evaluate efficacy of Unani drugs in the management of Faqr-ud-dam.

REVIEW OF LITERATURE

According to BUQRAT [FATHER OF MEDICINE] anaemia occurs due to derangement in quantity and quality of humour.

IBN-E-SINA [980-1037]AD in CANON OF MEDINE [AL QANOON FIT-TIB] describe that alteration in liver temperament causes its weakness which in turn causes FAQR-UD-DAM. JURJANI has also explained anaemia under the heading of liver weakness in his famous book ZAKHIRA KHWARZAM SHAHI

HAKEEM JALENOOS [GALEN 131-200] describe anaemia as 'Anaemia is loss of defence mechanism'. He used aab-e-aahan [iron water] to treat anaemic patient

MASEEHI describe any deviation [BA LIHAZ KAMIYAT WA KAIFIYAT] leads to fasad-e-khoon.

RAZI [841-926] have explained that SOO-E-MIZAJ-E-KABID barid wa ratab leads to the development of features of FAQR-UD-DAM

ALI BIN ABBAS AL MAJOOSI in his famous book "KAMIL-UL-SENA" mention that anaemia occurs due to weakness of power of liver, with altered temperament.

MASEEH-UL-MULK HAKEEM AJMAL KHAN [11th Feb 1868-29th December 1967] says that Faqr-ud-dam is actually a pre-monitoring symptoms of ascites which later involves other AAZ-E-RAISA.

In 17th century, term anaemia was first time introduced. Iron deficiency anaemia was discovered by KARL VIERORDT and his student H. WELCHER in 1852

Over the next century the details of iron regulation were elucidated. In 1949, FINCH and colleagues showed that reticulocytes [precursors of red blood cells] can incorporate iron from plasma to make haemoglobin.

In 1979, BOTHWELL published monograph about early iron homeostasis, by this time iron regulation was well understood.

DEFINITION OF ANAEMIA

Anaemia is defined as the reduction of haemoglobin [Hb] concentration, haematocrit, or a number of red blood cells per litre below the reference interval of healthy individual of similar age, sex, and race.

In other term there is a decreased Hb level which are insufficient for the body's demand.

ASBAB-E-MARZ

As per Unani concept anaemia is due to various etiological factor such as

- Zoaf-e-jigar [enfeeble hepatic function]
- Soo-e-mizaj jigar [impaired temperament of liver]
- Deedan-e-amaa [intestinal worms]
- Nuqs-e-taghzia [impaired diet]
- Jiryan-e-khoon [haemorrhage]
- Hamal [pregnancy]
- Zoaf-e-meda [gastric debility]
- Azm-e-tahal [splenomegaly]

CLINICAL FEATURES OF ANAEMIA

- Symptoms of anaemia may include shortness of breath, particularly on exertion, weakness, lethargy, palpitation and headache.
- Signs of anaemia may be divided as general or specific, general sign include pallor of mucous membrane or nail bed, which occurs if haemoglobin level is less than 9g/dl.

Apart from this tachycardia, systolic murmur, cardiomegaly, angular stomatitis, glossitis, koilonychia may be present.

- Iron deficiency anaemia increases the risk of infectious disease and reduces physical activity, reduce concentration and reduce learning ability.

FUNCTION OF LIVER AND ANAEMIA

In Unani System of medicine blood is regarded as mixture of akhlat [humours] i.e. dam [sanguine], balgham [phlegm], safra [yellow bile], and sauda [black bile]. Normal blood consists of akhlat-e-latifa [plasma] and kaseefa [corpuscles].

Normal blood is one in which all humours are in proper proportion in terms of quantity and quality and specific to each individual.

Morbid blood produced due to impurities/disease in the blood which ultimately alter its quantity and quality.

IBN-RUSHD [1126-1198 AD] mention that temperament of organ remains normal when the blood which provide nutrition to the organ is normal. This is only possible when digestive organ is normal.

When food enters into stomach, it is converted into substance called chylos [fluid substance resembles thick water, result of the food digestion for the first time]. It is then delivered into liver, chylos tenuity is absorbed in the liver by mesenteric vessel then it matures in the liver and finally becomes humour.

So generally liver is responsible for production of humour specially sanguine in order to feed whole body. Likewise JURJANI mention that liver is the principal organ or source of physical faculties.

There are 3 factors affecting the production of humour from liver

1. Hepatic equable heat [normal hepatic temperament]
2. Proper and equable food from temperamental point of view.
3. Adequate maturation of chylos by stomach.

Hepatic disorders such as impaired temperament, inflammation, obstruction [sodad] as well as liver asthenia can leads to hepatic dysfunction. Then anaemia will happen as a result of imperfect blood humour production.

Accordingly using hepatoprotective medicines are essential in treating anaemic patient irrespective of any sign and symptoms of hepatic disease. In other word treating the liver as the producer of blood humour has to be prioritize in the patient of anaemia.

RAZI states that anaemia occurring due to liver impairment resulting in pica and istesqa and recommended treatment with MUQAWWI JIGAR ADVIA and goat's liver.

PRINCIPAL OF UNANI TREATMENT

Removal of underlying cause.

- Improvement of digestion and appetite.
- Avoid consuming food causing altered temperament of liver leads to baroodat [coldness] or taqleel-e hararat e ghariziya [decrease innate heat of the liver].
- Avoid rataab [moist] ghaleez and dushwar hazm ghiza [spicy and hardly digestable food].
- Daily riyazat[exercise] in empty stomach.
- Avoid hammam [bath] and jimah [sexual intercourse] immediately after meals.
- Muqawwi jigar medicine to be used.
- Iron rich diet like meat, fish, cereals, green leafy vegetable like palak, raisins, few figs , honey should be added in diet.
- Liver, kidneys, meat, eggs were recommended by unani scholars.
- The present study entitled by 'THE CLINICAL STUDY OF IRON DEFICIENCY ANEMIA [FAQR-UD-DAM BA WAJAH ZOAF-E-JIGAR] AND ITS MANAGEMENT WITH UNANI MEDICINE' was conducted in Government Nizamia Tibbi College- Charminar, under the guidance of Professor and HOD of Department of Moalejat, Dr. M.A. Faroqui.

METHODOLOGY

This study includes 40 patients of either sex male and female, belonging to different age group ranging from 14 years to 60 years. As per rules, applied for CTRI, got registered with number CTRI/2022/10/046444. Ethical no 20314221001D. Patient suffering from Anemia were taken from outpatient department of Government Nizamia Tibbi College and Hospital. Inclusion and exclusion criteria were kept in mind. Patient were explained thoroughly about the research work, nature of studies, drugs used and also the mode of administration were explained in their own language of preference. Consent form and other formalities were done and after voluntarily accepting patient were included in present study. Study was conducted in the span of 1 year. Duration of treatment was 90 days.

Inclusion criteria –

- Age between 14 to 60 years
- Patient of either sex [male and female].
- Hb% 7gm% to 10gm%.
- All socioeconomic classes
- Already diagnosed cases.

Exclusion criteria –

- Inborn error of haemoglobin and liver metabolism.
- Other types of anaemia [like Megaloblastic, Aplastic types etc.]
- Melena
- Pregnancy.
- Cancer

Withdrawal criteria –

- Patient showing sensitivity towards drugs.
- Those who are not giving proper follow-up.
- Patient landing into complication like deranged kidney function or any other.
- Right of the participant to withdraw any time during the entire course of the study.

Diagnosis criteria –

- Hb ranging from 7 gm % to 10 gm%.
- Serum ferritin level.

Investigation criteria –

- CBP
- CUE
- ESR
- LFT
- SERUM FERRITIN

Efficacy assessment –

The assessment of efficacy of drugs were based upon two types of parameters

- SUBJECTIVE PARAMETER – This includes parameters like Fatigue, Pallor and Palpitation.
- OBJECTIVE PARAMETER – Hb%, Sr. Ferritin.

Medicine used in trial

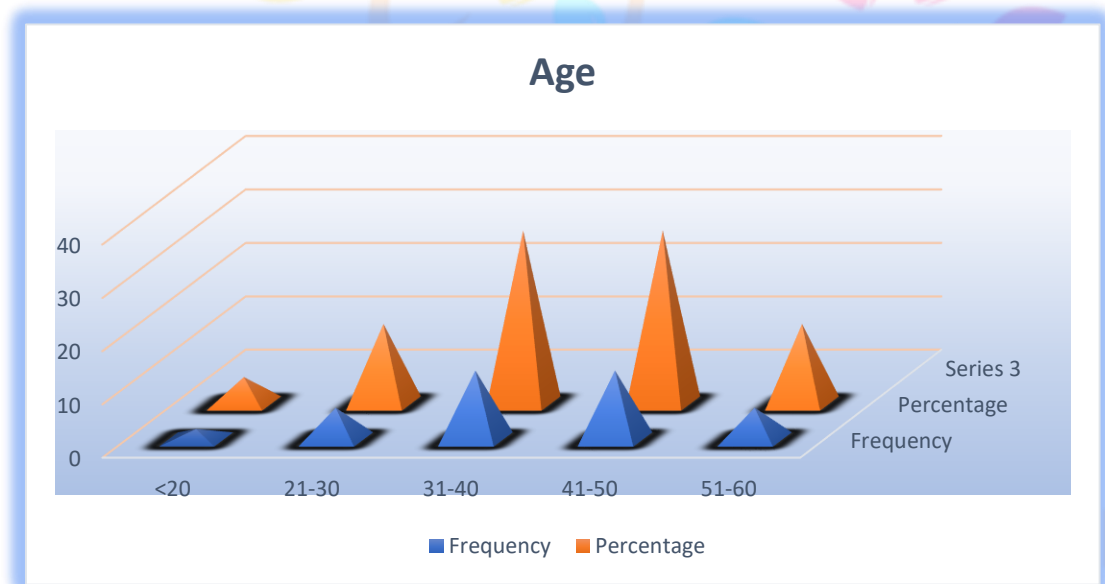
Following drugs were used in the study,

- Badiyan [2gm]
- Gul-e-surkh [2gm]

- Parsiyaoshan [2gm]
- Maweez munaqqa [1.5gm]
- OBSERVATION AND RESULT

Table – 1: Distribution of patients according to AGE

Sr. NO	Age	Frequency	Percentage
1	<20	2	5
2	21 – 30	6	15
3	31 – 40	13	32.5
4	41 – 50	13	32.5
5	51 – 60	6	15
6	Total	40	100

**Table 2 :- Distribution of patient according to gender.**

Sr.no	Gender	Frequency	Percentage
1	Male	13	32.5
2	Female	27	67.5
3	Total	40	100

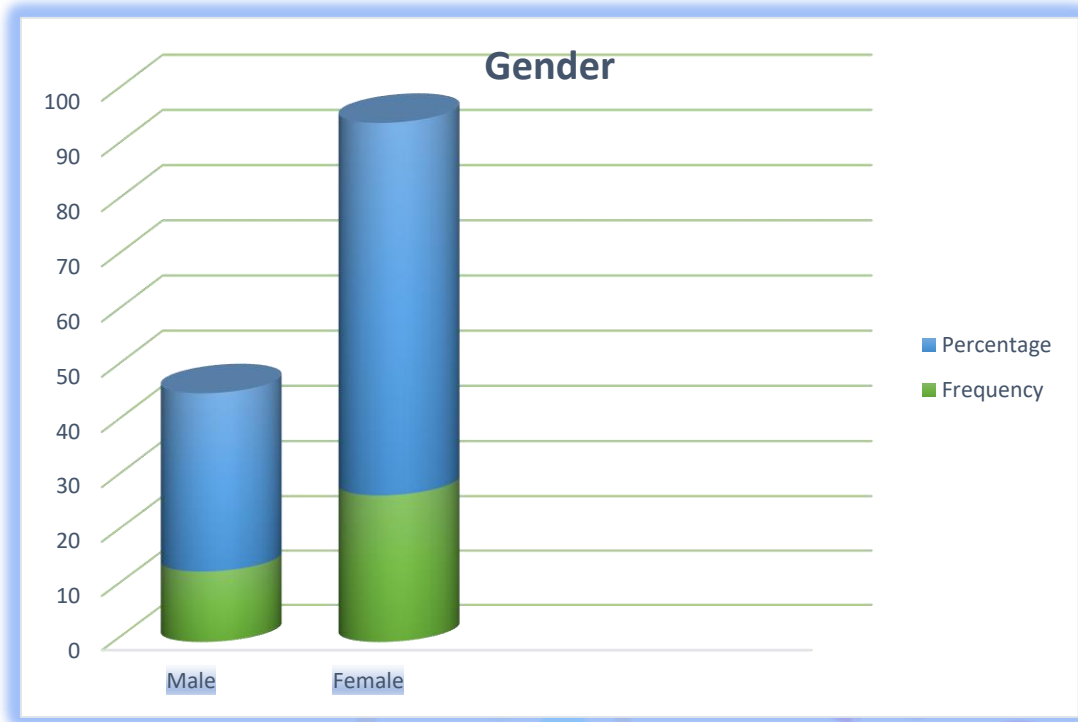


Table – 3: Distribution of patient according to Religion.

Sr.NO	Religion	Frequency	Percentage
1	Hindu	14	35
2	Islam	26	65
3	Total	40	100

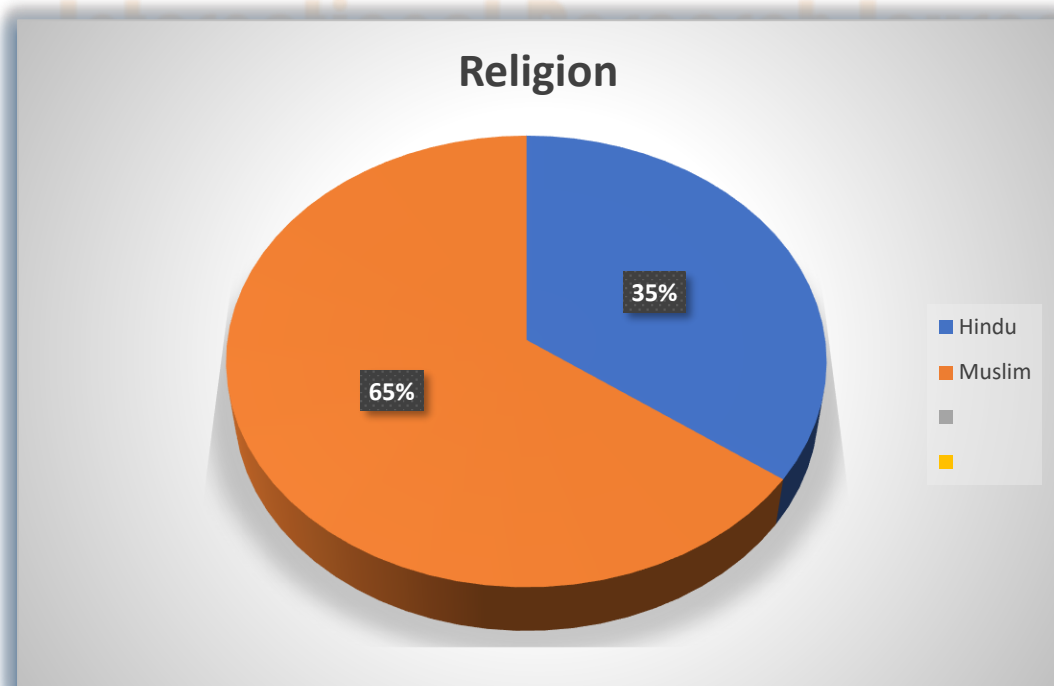
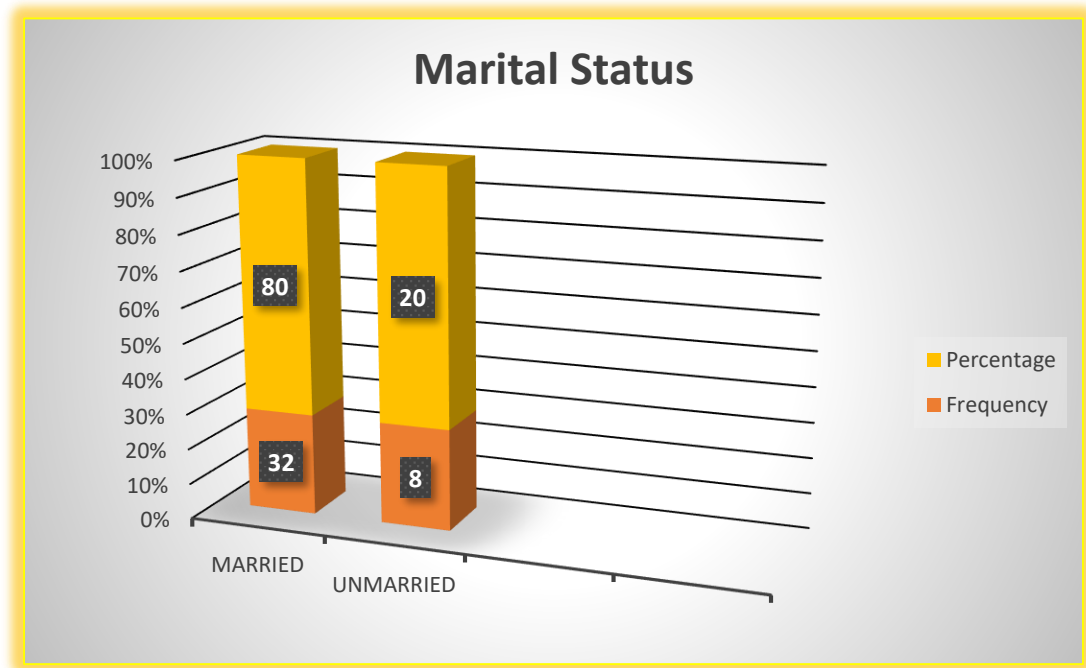


Table – 4: Distribution of patient according to Marital Status.

Sr.no	Marital status	Frequency	Percentage
1	Married	32	80
2	Unmarried	8	20
3	Total	40	100

**Table – 5: Distribution of patient according to Occupations.**

Sr.no	Occupation	Frequency	Percentage
1	Business	4	10
2	Employed	15	37.5
3	Farmer	3	7.5
4	House wife	13	32.5
5	Student	5	12.5
6	Total	40	100

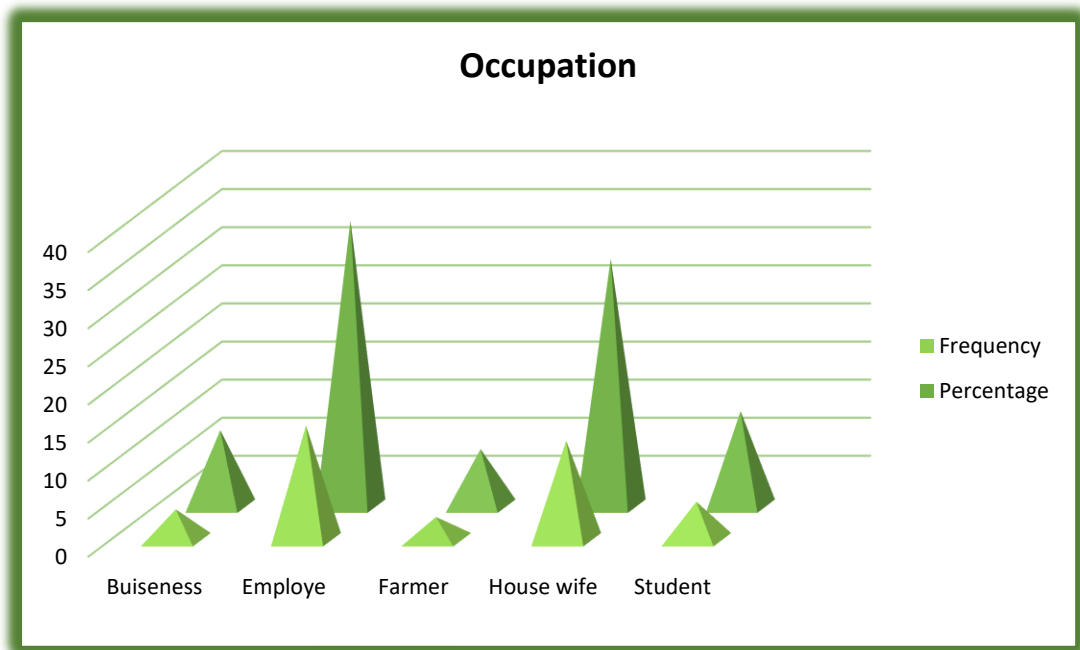


Table – 6: Distribution of patient according to Socio-economic status.

Sr.NO	SES	Frequency	Percentage
1	L/C	12	30
2	M/C	18	45
3	U/C	10	25
4	Total	40	100

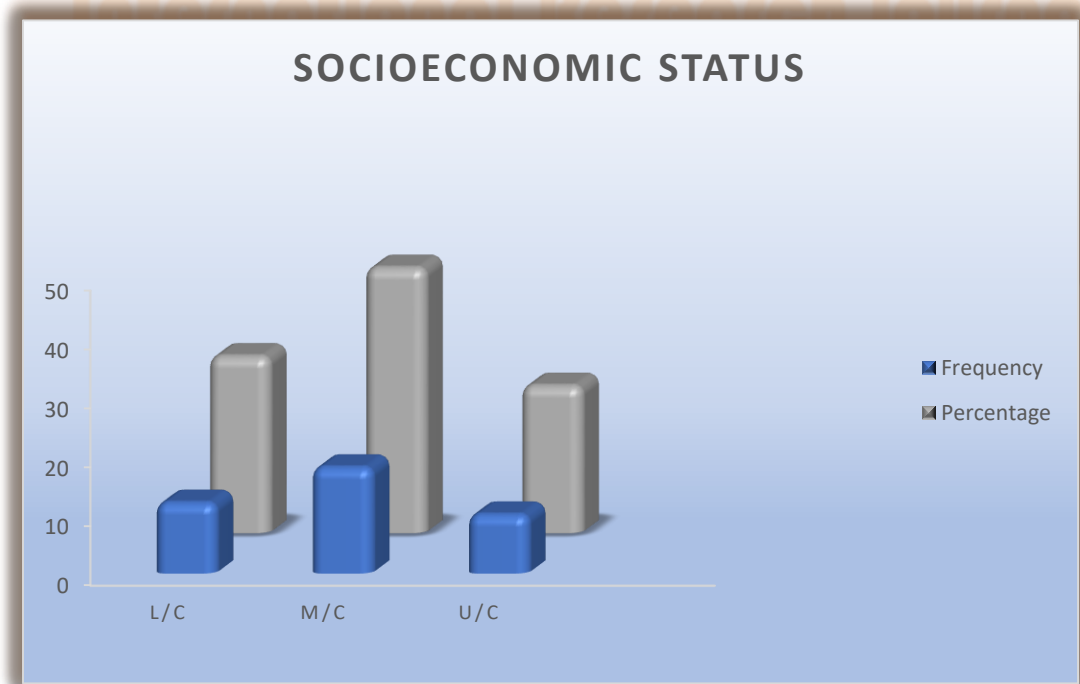
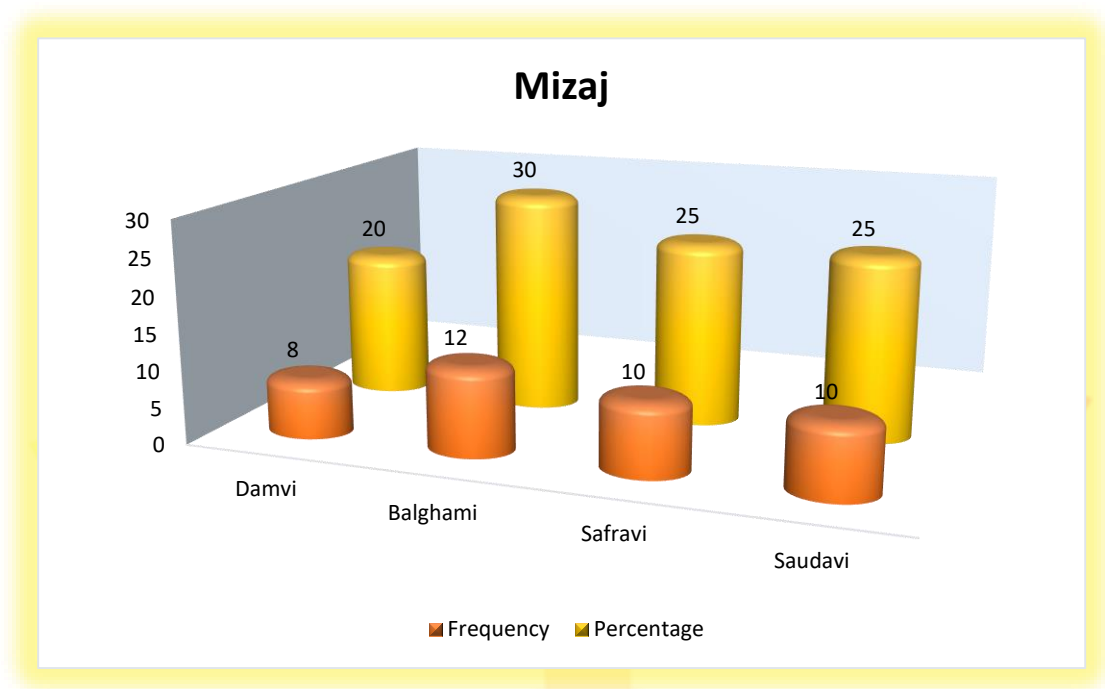


Table – 7: Distribution of patient according to Mizaj.

Sr.no	Mizaj	Frequency	Percentage
1	Damvi	8	20
2	Balghami	12	30
3	Safravi	10	25
4	Saudavi	10	25
5	Total	40	100

**Table – 8: Distribution of patient according to Diet.**

Sr. No	Diet	Frequency	Percentage
1	Veg	15	37.5
2	Mixed	25	62.5
3	Total	40	100

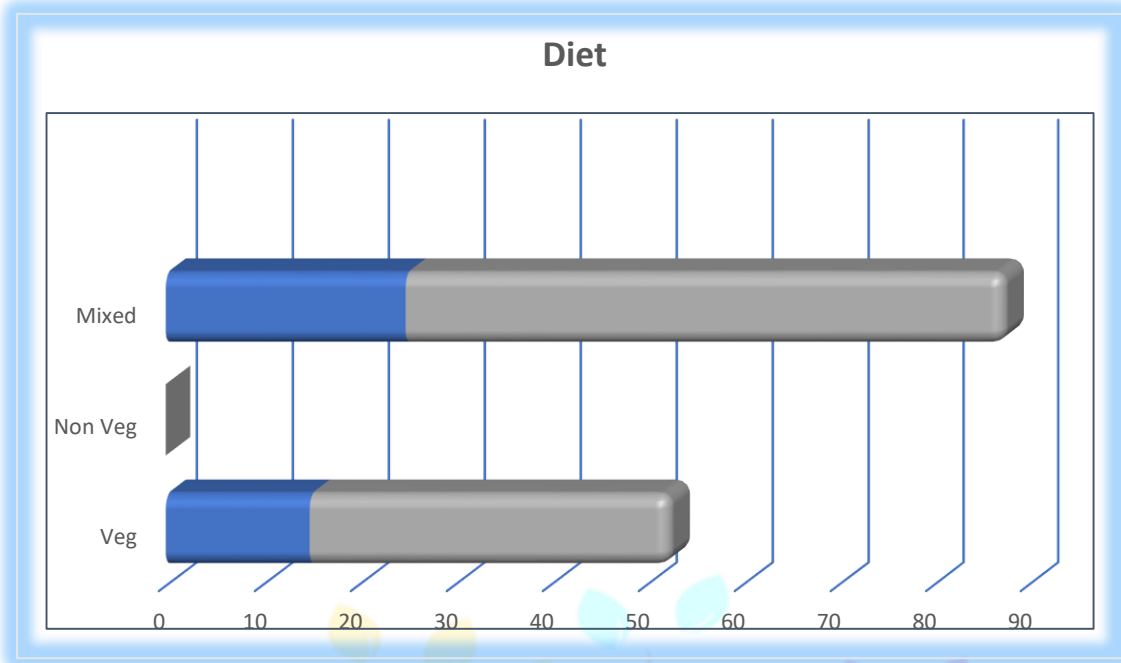


Table – 9: Distribution of patients according to Pallor.

Sr.No	Grading	0D	45D	90D
1	No complaints	0	17.5	47.5
2	Mild	52.5	62.5	47.5
3	Moderate	45	20	5
4	Severe	2.5	0	0

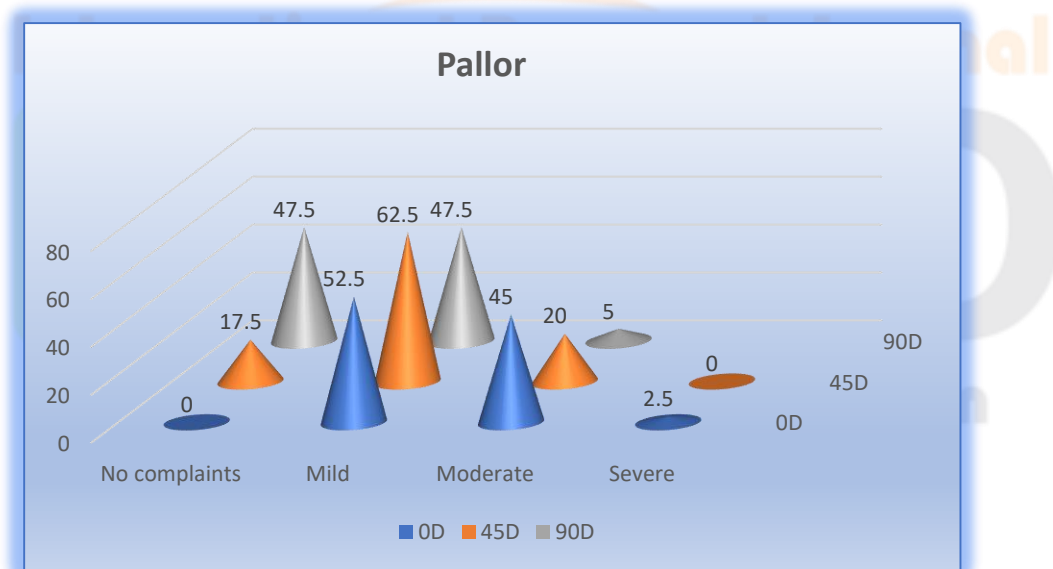


Table – 10: Distribution of patients according to Fatigue.

Sr.No	Grading	0D	45D	90D
1	No complaints	0	5	45
2	Mild	30	60	42.5
3	Moderate	55	32.5	12.5
4	Severe	15	2.5	0

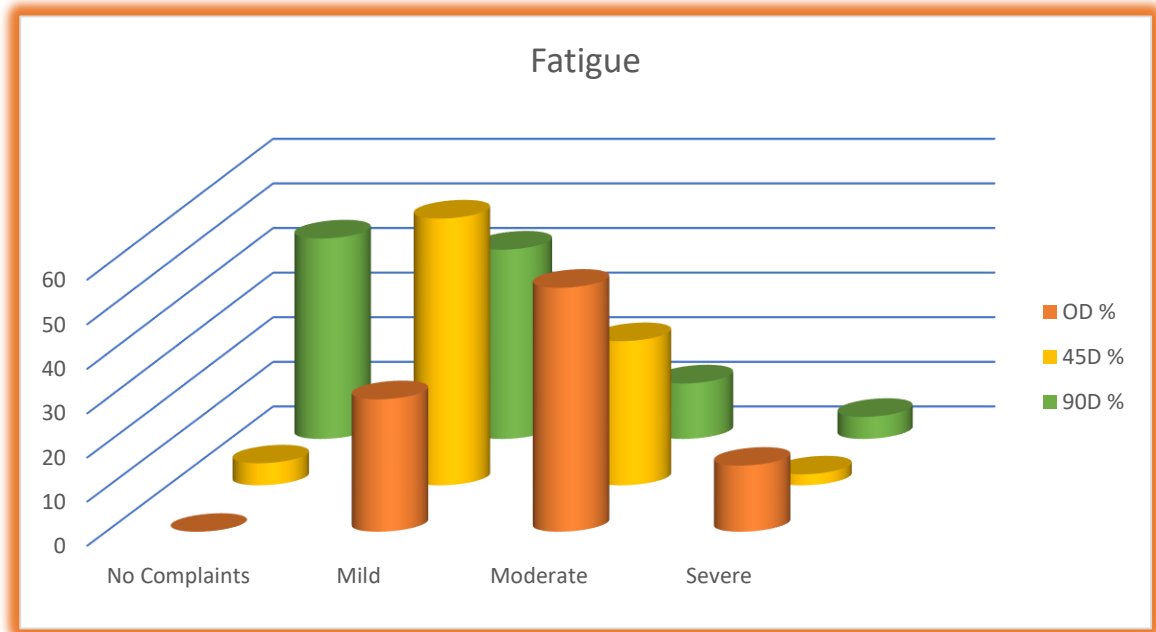


Table – 11: Distribution of patients according to Palpitation.

Sr.No	Grading	0D	45D	90D
1	No complaints	15	57.5	87.5
2	Mild	62.5	32.5	7.5
3	Moderate	17.5	10	5
4	Severe	5	0	0

Research Through Innovation

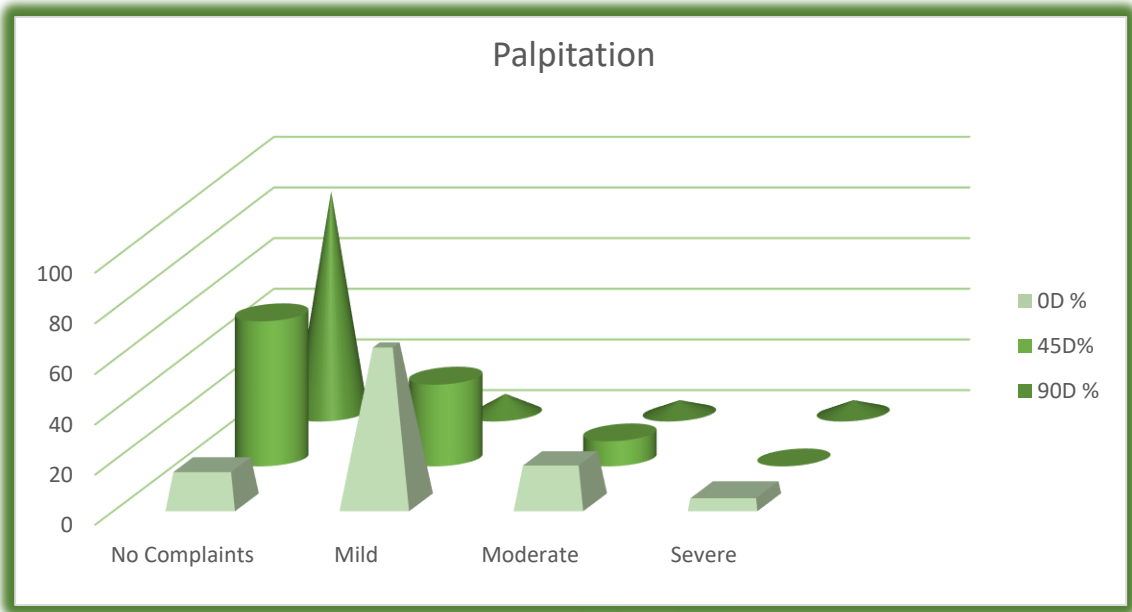


Table – 14: Showing Haemoglobin findings (mean +/- SD) before and after treatment.

Sr.no	Haemoglobin	N	Mean	SD
1	BT	40	9.3050	.68797
2	AT	40	11.7900	1.09188

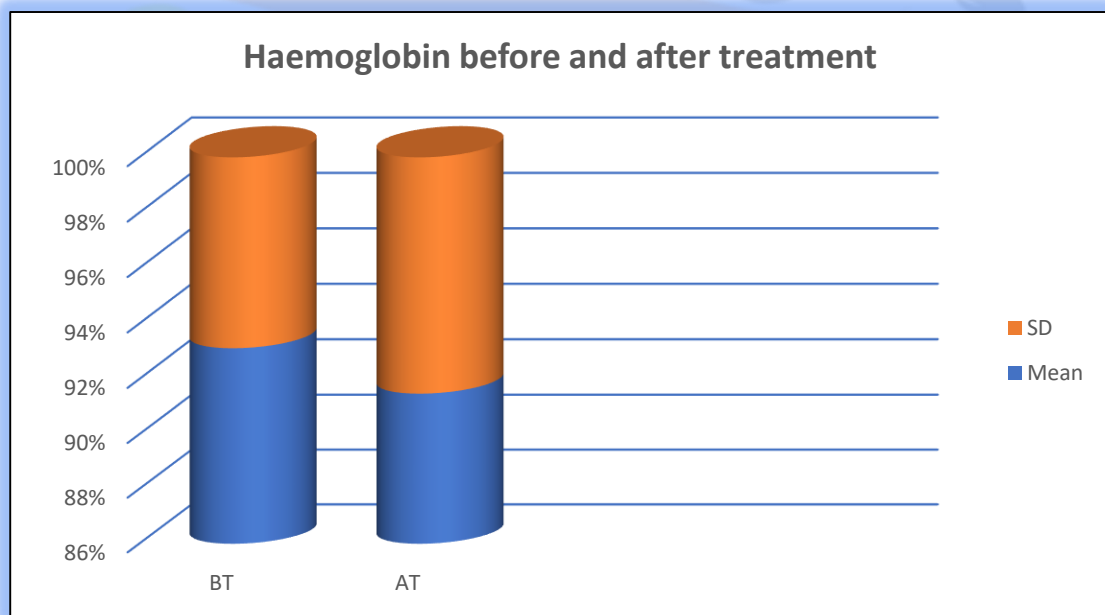
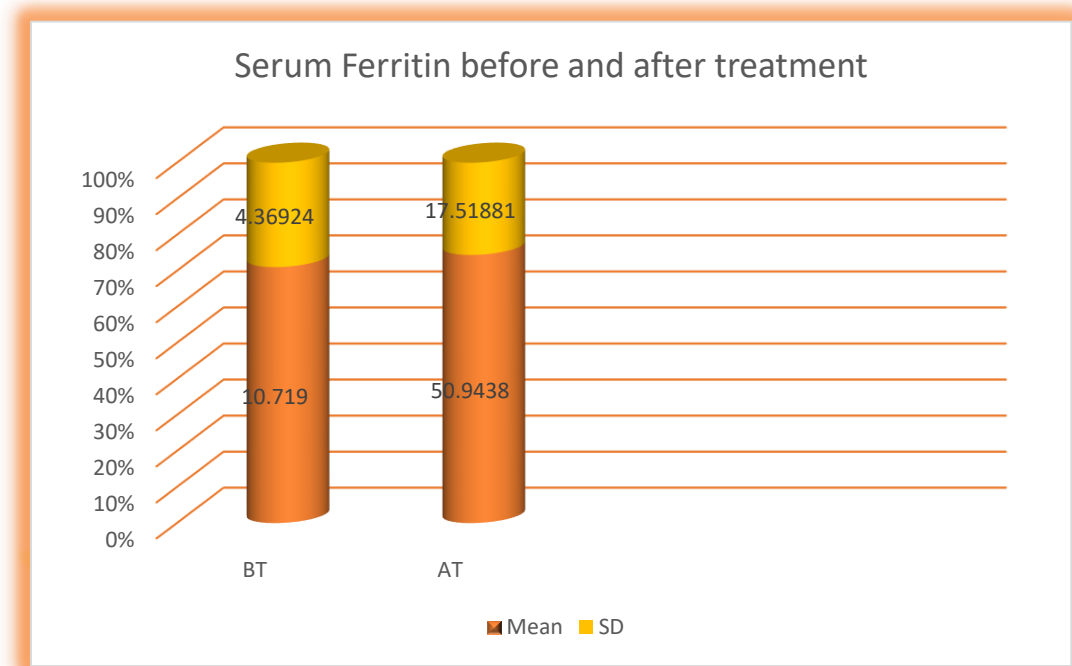


Table – 15: Showing Serum Ferritin findings (mean +/-SD) before and after treatment.

Sr.no	Serum Ferritin	N	Mean	SD
1	BT	40	10.7190	4.36924
2	AT	40	50.9438	17.51881



CONCLUSION

Iron balance is essential for all cell life. Iron haemostatic mechanisms evolved to avoid iron excess and the generation of harmful reactive oxygen species by reutilizing the body's iron. The inevitable other side of the coin is the easy development of iron deficiency.

The use of iron supplements may cause side effects like constipation, black stools, diarrhoea, nausea, abdominal pain etc. While the Unani medicine plays a vital role in the management of anaemia through easy availability, safety, efficacy, and above all with least side effects. Hence the research conducted on patients reveals a significant difference in subjective and objective parameters of selected patients.

SUMMARY

ANAEMIA can be literally defined as low level of haemoglobin in the blood. Haemoglobin is the protein present on the surface of RBC's and they are responsible for carrying oxygen in blood. It's a major public health issue globally. It generally occurs when iron demand of the body is not met by iron absorption. IDA may be caused by deficient intake or absorption, excessive demand, repeated pregnancies or deficient utilization.

In UNANI system of medicine liver has given great importance because it is considered as source of innate immunity [hararat-e-ghariziya] of the body. It's a prime organ for quwat-e-tabai. Its an organ for the production of akhlat [humour]. Derangement in the temperament of liver causes derangement in akhlat formation which in turn results in the accumulation of mawad-e-fasida [toxins] in our body

Razi [Razes 841-926 AD] and Abul Hasan Ahmed Bin Mohammed Tabri [10th century AD] have mentioned that soo-e-mizaj Kabid Barid wa Ratab [deranged cold and wet temperament of liver] leads to the development of features of IDA.

Modern management of IDA used oral iron supplements which can attribute to many side effects like abdominal pain, constipation, indigestion, nausea and many more.³²

Keeping all these in mind, this clinical study was carried out in GNTC, to evaluate the efficacy of Unani medicine in the management of iron deficiency anaemia.

REFERENCES

- 1] Allama Mohammed Kabir-ud-deen, Bayaz-e-Kabir Kamil, Hissa 3, Page 138.
- 2] Hakeem Zakariya Razi, Kitab-ul-Havi, Baab 7, Page 48.
- 3] Hakeem Wasim Ahmed Azmi, Kitab-ul-Moalejat, Idara Kitab-ul-Shifa, Page 71-76.
- 4] Hakeem Ajmal Khan, Haziq, Idara Kitab-ul-Shifa, Page 311, 292,293.
- 5] Hakeem Ali Bin Rabban Tabari, Mutarajjim Hakeem Rasheed Ahmed Nadvi, Firdaus-ul-Hikmat Fit Tib, Baab 1, CCRIUM, Page 206, 452.
- 6] Hakeem Gulam Imam Shah, Ilaj-ul-Gurba, Page 92-95.
- 7] Hakeem Kabir-ud-Deen, Al-Akseer, Aijaz Publication House, Page 872.
- 8] Hakeem Abdul Jabbar, Jadeed Rehnuma-e-Ilaj, Page 139-141.
- 9] Hakeem Gulam Jelani, Makhzan-ul-Ilaj Ilaj-ul-Mufradat wa Mujarrabat ka encyclopedia, Jild 1 and 2, Idara Kitab-ul-Shifa, New delhi, Page 511.512
- 10] The Unani Pharmacopoeia Of India, Part 1, Volume 4, Page 15,43,44,96,97.
- 11] Hakeem Akbar Arzani, Tibb-e-Akbar, Idara Kitab-ul-Shifa, Page 442.443.
- 12] Hakeem Shams-ul-Afaque Siddiqui, Shifa-ul-Amraz, Page 101,102.

- 13] Allama Hakeem Najm-ul-Gani Rampuri, Khazayn-ul-Advia, Volume 1 to 4, Page 1131,1134,1135.
- 14] Hakeem Kabir-ud-deen, Makhzan-ul-Mufradat, Page 93, 385, 128, 339.
- 15] Shaikh-ur-Rais Abu Ali Sina, Al Qanoon Fit Tib, Page 47
- 16] Hakeem Ismail Jurjani, Zakhira Khwarzam Shahi, Page 377, 411, 415.
- 17] Sharah Asbab, Hissa 2, Page 560-562.
- 18] KM Nadkarni, Indian Materia Medica, Revised by AK Nadkarni, Volume 1, Bombay population prakashan, Page 43, 1072,1073,1286,1285,1287.
- 19] R. Harrison, Principal of Internal Medicine, Volume 1 and 2, Page 361,630,1844,1845.
- 20] Nicholas A. Boon, Nicki R. Colledge, Brian R. Walker, John A.A. Hunter, Davidson Principles and Practice of Medicine, Edition 20, Page 126. 1012,1025,1027, 1030.
- 21] F. Golwalla, Golwalla Book of Medicine, Edition 22, Page 335.
- 22] RA Hope and M Longmore, Oxford Handbook of Clinical Medicine, Page 574.
- 23] L Prakasam Reddy, Fundamentals of medical physiology, 3rd edition, Page 162-165, Paras Publishing.
- 24] Robin Reid, Fiona Roberts, Pathology Illustrated, 6th edition, Page-380,381,387
- 25] PJ Mehta, Practical Medicine, 14th Edition, Page 52.53,16.
- 26] Siddarth N. Shah, API Textbook of Medicine, 7th Edition, Page 922,923,924.
- 27] Harsh Mohan, Textbook of Pathology, 6th Edition, Page 295, 296, 297, 298, 299, 300.
- 28] J. Machpee, Current Medical Diagnosis and Treatment, Page 508,509,510.
- 29] Clara Camaschella, Iron metabolism and its disorders, American Society of Haematology, January 3, 2019.
- 30] Shabnam Ansari, Mohammed Akhtar Siddiqui, Fasihuz zaman, Therapeutic Principles of Liver Diseases in Unani Medicine, J Res Educ Med, Vol XXI, 2015.
- 31] Tausif Khan, Sadaf Khanum, Soo-ul-qinya Bawajah Qillat-e-faulad [Iron deficiency anemia]: An overview, International Journal of Unani And Integrative Medicine, 2021;5[2];28-30.

32] Dr. Fatima Bi, The Clinical Study of Iron Deficiency Anaemia [Faqr-ud-dam Bavajah Kami-e-Faulad] And Its Management With Unani Medicine, GNGH, Hyderabad, 2014-2015.

33] Bryar Jalal, Prevalence and causes of anaemia in early childhood, University of sulaimani, January 2021.

34] Dr. Md. Irshad Hussain and Dr. Akhlaque Hussain, Concept of temperament in Unani system of medicine, The Pharma Innovation Journal 2019;8[9]:07-11

35] Reyaz Ahmed, Md.Razi Ahmed, Md.Najibur Rahman, Md. Tanweer Alam, Su-ul-Qinya and their clinical co-relation with Anaemia,American Journal of Pharmacy and Health Research,Volume 8, Issue08, 2020.

36] Md. Anzar Alam,Zaheer Ahmed, Danish jahan, Qamri MA, Faqr-ud-dam (Anaemia) An Age Old Malady in Unani Medicine-An Overview, International Journal Of Pharmamedix India, Volume 2, Issue 4, Jan 2015.

