Efficacy of *Majoon Khabsul Hadeed* in *Faqruddam ba Sabab-e-Qillat-e-Faulad* (iron deficiency/ microcytic-hypochromic anaemia)

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*Faqruddam ba Sabab-e-Qillat-e-Faulad* (iron deficiency/ microcytic-hypochromic anaemia) is responsible for greater morbidity and mortality than any other haematologic disorder, affecting about 25-50% population of developing countries. The incidence of anaemia is highest among women and young children, varying between 60-70%. In rural India, anaemia is much more widespread than believed, even among men. The important etiologies may include GI blood loss due to intestinal worm infestation, NSAIDs, malignancies, multiple pregnancies, menstrual irregularities, growth spurts, etc. It is characterized by stomatitis, glossitis, swollen & inflamed gums, pallor on conjunctiva and nails, fatigue and exertional dyspnoea. The management of the disorder comprises dietary/drug supplementation containing iron in different forms. In Unani System of Medicine many drug formulations are being prescribed for its management like *Majoon Khabsul Hadeed*, *Sharbat-e-Faulad*, *Kushta Faulad*, *Sayyal-e-Faulad*, etc., which comprise iron on one hand and having hepatoprotective/ haemopoietic activity on the other. Significant improvement in symptoms & signs and laboratory findings of the disorder was observed. The formulation was found effective in *Faqruddam ba Sabab-e-Qillat-e-Faulad*, especially improved PCV, MCV and serum iron.

Keywords: *Unani* medicine, Iron deficiency, Anaemia

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Acute or chronic blood loss has been responsible for greater morbidity and mortality than any other haematologic disorder leading to deficiency of iron in the body. The history of iron deficiency parallels human culture, industrial, and geopolitical evolution. The clinical manifestations of iron deficiency anaemia appear to have been recognized in the earliest times. In this context the renowned Persian physician Avicenna described a disease *Soo-Ul-Qiniya* which is very similar to iron deficiency anaemia, with clinical features of edema on legs, face and periorbital area, pallor, dyspnoea, amenorrhea, inflammation and itching on lips, lethargy and malaise, etc. In late 1920s and early 1930s, a distinct form of anemia (microcytic-hypochromic anaemia) was identified, which corresponds to the iron deficiency anaemia as we know it today.

Anaemia is a worldwide problem with the highest prevalence in developing countries. It is estimated that about 10% populations of developed countries and as much as of 25-50% in developing countries are anaemic among them. Iron deficiency accounts for most of this prevalence. The incidence of anaemia is highest in women and young children, varying between 60-70%. Recent surveys indicate that in rural India, anaemia is much more widespread. Iron deficiency can arise either due to inadequate intake or poor bioavailability of dietary iron or due to excessive losses of iron from the body. Gastrointestinal blood loss due to helminthic infestations is a major etiology, while gastric ulceration and neoplasm accounts for another causative factor. Today, menstruating women continue to be among the most likely individuals to develop iron deficiency along with young children whose growth outstrips their iron supply. The management of the disorder comprises dietary/drug supplementation containing iron in different forms. In Unani System of Medicine, many drug formulations are in use for the management of *Faqruddam ba Sabab-e-Qillat-e-Faulad* e.g. *Majoon Khabsul Hadeed*, *Sharbat-e-Faulad*, *Kushta Faulad*, *Sayyal-e-Faulad*, etc., which comprise iron as well as having

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hapatoprotective and haemopoietic properties. But a few formulations have been studied clinically and scientifically. Majoon Khabsul Hadeed is one of the best drugs of its kind for the management of haemorrhoids.

Methodology
The study was conducted on 40 patients suffering from Faqruddam ba Sabab-e-Qillat-e-Faulad (iron deficiency anemia), who attended the outdoor and indoor sections of Department of Moalejat in Ajmal Khan Tibbiya College Hospital, Aligarh Muslim University, Aligarh during 2006-2008. The patients belonging to either sex and between age group 15-65 yrs were selected randomly for the study. Only those patients, who came with the complaints of fatigue, lassitude, palpitation, exertional dyspnoea, faintness were taken into considerations; examined for pallor on palpebral conjunctiva and palmer creases, bald and pale tongue, glossitis, systolic flow murmur, tachycardia and edema and investigated to ascertain the diagnosis, with hemoglobin and serum iron below 10 gm, 50µg/dl, respectively. Apart from these investigations, PCV, RBC count, MCV, MCH, MCHC and TIBC were also done for better comparison of results. Those suffering from active bleeding, chronic disease, any systemic disease (diabetes mellitus, coronary artery diseases, pulmonary tuberculosis, etc); mentally impaired, and pregnant women were excluded from the study. The study was open and each patient acted as his/her own control. The drug Majoon Khabsul Hadeed was procured from Dawakhana Tibbiya College, Muslim University, Aligarh. The drug being a Unani pharmacopoeia drug was prepared according to classical text (Table 1). Majoon Khabsul Hadeed in a dose of 6 gm was administered twice daily for 60 days with monthly follow-up and no concomitant treatment was allowed during the study for the disorder.

Results
From the observations it is evident that, stomatitis and glossitis was subsided in 100% cases, followed by paraesthesia (74% cases), swelling (69% cases) and faintness (67% cases), etc. Minimum benefit was seen in fatigue and exertional dyspnoea, with an improvement in 20% cases and 21% cases, respectively (Table 2). The drug has maximum effect on swollen and inflamed gums, glossitis and brittleness of nail, subsiding 100% cases after 60 days of treatment, followed by bald tongue (93.5% cases), edema (86% cases) and systolic flow murmur (78% cases). Improvement in pallor on conjunctiva and nails was observed as 62.5% and 70% cases, respectively. Koilonychia was observed only in 1 patient and there was no improvement at all even after 60 days of treatment (Table 3). The mean hemoglobin value before the treatment was 6.48 ± 1.214 (gm%), which improved to 8.72 ± 1.207 (gm%) after 60 day of treatment. On applying paired t-test it was found that t=14.36; p<0.001. The mean RBC count before treatment was 3.24 ± 0.1464 (million/cu mm), which improved to 3.635 ± 0.214 (million/cu mm) - t=11.899; p<0.001. The mean PCV before treatment was 23.7 ± 3.299 (%), which improved to 28.35 ± 2.992 (%) - t = 13.648; p<0.001. The mean MCHC before treatment was 73.01 ± 8.441 (femtolitre), which improved to 77.94 ± 6.154 (femtolitre) - t=8.638; p<0.001. The mean MCHC before treatment was 7.93 ± 3.228 (picogram), which improved to 23.89 ± 2.378 (picogram) after 60 days of treatment- t= 13.100; p<0.001. The mean MCHC before treatment was 27.22 ± 2.367 (%) which improved to 30.66 ± 1.890 (%) after 60 days of treatment - t=10.209; p<0.001. The mean serum iron increased from 29.23 ± 8.132 µg/dl to 68.175 ± 12.393 µg/dl with value of t= 23.909 and that of p>0.001. The mean total iron binding capacity (TIBC) before treatment was 349.925 ± 27.168 µg/dl, which reduced to 349.925±27.168 µg/dl after 60 days of treatment with value of t= 21.386 and that of p<0.001 (Table 4). Hence, in all these laboratory parameters the improvement was found to be highly significant statistically.

<table>
<thead>
<tr>
<th>Name of the drug</th>
<th>Chemical/botanical identity</th>
<th>Parts used</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khabsul hadeed (mudabbar)</td>
<td>Iron rust (processed)</td>
<td>Iron rust</td>
<td>35 gm</td>
</tr>
<tr>
<td>Aud</td>
<td>Aquilaria agallocha Roxb.</td>
<td>Root</td>
<td>3.5 gm</td>
</tr>
<tr>
<td>Saad kafi</td>
<td>Cyperus scariosus R.Br.</td>
<td>Root</td>
<td>3.5 gm</td>
</tr>
<tr>
<td>Zanjabeel</td>
<td>Zingibar officinalae Rosc.</td>
<td>Rhizome</td>
<td>3.5 gm</td>
</tr>
<tr>
<td>Filfil siyah</td>
<td>Piper nigrum Linn.</td>
<td>Fruit</td>
<td>3.5 gm</td>
</tr>
<tr>
<td>Ajwain desi</td>
<td>Trachyspermum ammi Linn.</td>
<td>Fruit</td>
<td>3.5 gm</td>
</tr>
<tr>
<td>Izkhar makki</td>
<td>Cymbopogon nardus Linn.</td>
<td>Whole plant</td>
<td>3.5 gm</td>
</tr>
<tr>
<td>Halaila siyah</td>
<td>Terminalia chebula Retz.</td>
<td>Fruit</td>
<td>20 gm</td>
</tr>
<tr>
<td>Halaila zard</td>
<td>Terminalia chebula Retz.</td>
<td>Fruit (ripe)</td>
<td>20 gm</td>
</tr>
<tr>
<td>Shahad khalis</td>
<td>Honey</td>
<td>3 Times of total quantity</td>
<td></td>
</tr>
</tbody>
</table>
have anti-ulcerative and/or ulcer healing properties; Haemostatic drugs of astringent effects, stop blood loss in general and iron haemopoietic effect of the blood production in the body is increased by making up the deficient iron status of the body tissue. Haemostatic drugs of styptic (haemostatic) and diuretic property of hands & feet, Paraesthesia in palms and soles, Fatigue, Lassitude, Edema, Glossitis, Rhesus inconjunctiva, Pallor on nails, Pallor on conjunctiva, Whitening of palms and soles, Tachycardia, Edema, Systolic flow murmur, Swollen and inflamed gums, Glossitis, Brittleness, Koilonychia.

Discussion

By administrating the drug Majoon Khabsul Hadeed, most of the clinical features benefited due to improved haemopoiesis (blood production) and by making up the deficient iron status of the body tissue. Medicinal properties/ actions of the some individual drugs of Majoon Khabsul Hadeed, had improved blood production as well improved clinical features. The blood production in the body is increased by haemopoietic effect of Khabsul Hadeed and Saad-e-Kufi.7-9,11 The drugs having styptic (haemostatic) and astringent effects, stop blood loss in general and iron loss in particular from the body. Haemostatic drugs of the formulation include Khabsul Hadeed, Saad-e-Kufi, Zanjabeel, Izkhar Makki, Filfil Siyah, and Halaila, whereas astringent drugs are Aud and Halaila.7-11,16 Some constituents of the formulation have anti-ulcerative and/or ulcer healing properties; checking bleeding from lesion, ultimately helping in management of blood loss. These drugs include Zanjabeel, Filfil Siyah and Halaila11. Saad-e-Kausi; Izkhar Makki; Zanjabeel and Ajwain Desi and Halaila kill and expel the intestinal worms leading to check GI tract blood loss and improvement in anaemia and general health.7,10-14 Laxative and purgative effect of Aud, Zanjabeel, Izkhar Makki, Filfil Siyah and Halaila help to relieve constipation, a common side effect of iron therapy and to expel the helminthes too.7-10,12,14-17 Anti-inflammatory (Muhallil-e-Aurama) effect of Izkhar Makki, Ajwain Desi and Filfil Siyah and diuretic property of Aud, Saad-e-Kufi, Ajwain Desi, and Filfil Siyah also help to cure stomatitis, gingivitis, glossitis, bleeding gums and gastro-intestinal ulcers and edema, respectively.7-10,11-12,14-17

Conclusion

Majoon Khabsul Hadeed not only provides the iron supplement, but also manages most of the etiologies of Faqruddam ba Sabab-e-Qillat-e-Faulad (iron deficiency/microcytic-hypochromic anaemia). Thus managing Faqruddam ba Sabab-e-Qillat-e-Faulad with Majoon Khabsul Hadeed is a holistic approach, which is backbone principle of management in Unani System of Medicine.

References


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