Clinical evaluation of *Tamarindus indica* Linn seeds in uterine prolapse

Ashfaque Ahmad, Wasim Ahmad, Mohd Sajid, Azhar Hasan and Fahmeeda Zeenat

Abstract

**Introduction:** Uterine prolapse (Nutu-e-Rahem) is a major health problem affecting large population of women. The available management includes preventive, pessary and surgical treatments. But the only effective method is surgery. Unani system of medicine claims to possess a number of effective and safe therapeutic agents. But despite being extensively used in its management, have yet not been scientifically studied. Therefore, in the present study an attempt has been made to evaluate the efficacy of *Tamarindus indica* Linn seed (Tukhm-e-Tamar Hindi) in I<sup>st</sup> and II<sup>nd</sup> degree of uterine prolapse.

**Materials & Methods:** Test drug was procured from local market of Malegaon. Its kernel was separated after become roasted and powdered finely in an electric grinder. The powdered drug in a quantity of 5 gm was kept in a gauze piece to make tampon for local use. Thirty diagnosed patients were included in the study. They were treated with intravaginal tampon at bed time for 3 months except during menses.

**Result & Discussion:** The results of the study revealed that the test drug is effective in 36.66% of the patients as the clinical features of uterine prolapse were found to be relieved completely in these patients. Other patients who were not cured completely were found to have symptomatic relief as some of the symptoms improved significantly indicating that the test drug at least has partial relief for all the patients. Uterine prolapse is considered a difficult ailment to be treated completely with drug.

**Conclusion:** The findings suggested that the test drug is effective in the management of I<sup>st</sup> and II<sup>nd</sup> degree of uterine prolapse and well tolerated by the patients without any side effects.

**Keywords:** Tukhm-e-Tamar Hindi, *Tamarindus indica*, uterine prolapse, Nutu-e-Rahem

**Introduction**

Prolapse i.e. procidentia is derived from the Latin word ‘procidere’ which means to fall. Uterine prolapse (Nutu-e-Rahem) is protrusion of uterus into or out of the vaginal canal. It is in fact a form of hernia. It is important to remember that uterine descent is always associated with vaginal prolapse i.e. uterus will carry a part of vagina as well, whereas vaginal prolapse may occur without any associated uterine descent. It is hushed disorder with an enormous effect on women’s quality of life. It happens mostly in postmenopausal and multiparous women due to the weakness of ligaments or due to the laxity. It still remains an issue of major health concern, affecting large population of women in both developing and developed countries. It is one of the most common gynaecological conditions, accounting for about 10% of the hospital admission. It affects up to 40% of parous women. Normally when a women strain, there is no decent either of the vaginal wall or the uterus; whereas, in prolapse straining causes protrusion of the vaginal wall at the vaginal orifice. In the severe cases, cervix of the uterus may be pushed to the level of the vulva; and in extreme cases, whole uterus and most of the vaginal wall may be extruded from the vagina and protrusion may persist in absence of strain. Uterus and vagina are put in position by the ligamentous support, like cardinal ligaments (mackenrodt’s ligament), uterosacral ligament, pubo-cervical fascia, levator ani muscles, urogenital diaphragm and perineal muscles, perineal body and rectovaginal fascia, posterior vaginal wall. Any laxity or weakness in this support causes downward movement of uterus and walls of vagina.

The commonest causes of the prolapse are child birth trauma to the pelvic support, postmenopausal atrophy of the uterus and its supports, primary or the congenital weakness of the pelvic supports; chronic bronchitis, constipation and large abdominal tumours, tends to aggravate the condition. Its symptoms are variable. Patient may complain of something coming out of the vagina, lower abdominal pain, backache, vaginal discharge and urinary symptoms like frequency and difficulty of micturition, stress incontinence,
difficulty in bowel and coital difficulty \cite{41}. As per Unani literature, prolapse of uterus i.e. *Natu-e-Rahem*, is downward displacement of the uterus and is visible through the vaginal orifice. The causes of this disease are divided into three categories, viz; external, internal, and obstetrical. External cause includes: falling from height, lifting heavy weight, pulling of heavy substance, trauma on pelvic floor, shouting, screaming, fear; which causes weakness in ligaments of uterus, leading to prolapse. Internal cause is *Ratubat-e-Balghamni*; when its quantity and quality changes and increased from normal, it causes laxity and weakness in the ligaments of uterus causing downward displacement of the organ. Third cause is obstetrical, like prolonged labour, delivery of heavy weight baby, forceful pulling of foetus or placenta by untrained midwife; this may cause pulling of uterus causing prolapse \cite{9}. The choice of treatment available in modern system of medicine is preventive, pessary and surgical treatment. The only effective method is surgery. Pessaries are used only for temporary purpose. It is a palliative treatment which does not cure uterovaginal prolapse \cite{3}. Such a situation warrants some alternative arrangements for the treatment of uterine prolapse and Unani Medicine (Tibb-e-Unani) claims to possess a number of safe and effective drugs that can be used in its treatment. The Unani drugs possess *Qabiz*, *Habis*, *Mujaffij*, and *Muqawvi Rahem* properties are useful to cure this disease successfully \cite{9, 10}. Even though, many drugs are in use extensively in this disease by Unani physicians since ancient times but still they have not been scientifically evaluated on specific parameters for their efficacy and safety. *Tukhm-e-Tamar Hindi* (*Tamarindus indica* Linn seed) is also one such drug mainly described to possess *Qabiz*, *Mujaffij*, *Muqawvi* \cite{11} and *Muzayyaq-e-Farj* properties \cite{12}; useful in atony of vagina, rectal prolapse \cite{13} and for constriction of vagina \cite{11, 12, 14-16} since a long time without the reported any serious side effect. Therefore, a comprehensive study schedule has been designed to evaluate its efficacy in patients suffering from 1st and 2nd degree of uterine prolapse.

**Material and Methods**

*Tamarindus indica* Linn seeds (*Tukhm-e-Tamar Hindi*) were procured from local market of Malegaon. The identity and purity of test drug was confirmed by a pharmacognostist. Its kernel was separated after become roasted. The kernel was powdered finely in an electric grinder. The powdered drug in a quantity of 5 gm drug was kept in a gauze piece to make tampon (Humool) for local use.

The permission of Institutional Ethics Committee (IEC) was taken prior to the initiation of the clinical trial. The patients visited the OPD, Department of Ilmul Qabalat wa Amraz-e-Niswan, Mohammadia Tibbia College & Assayer Hospital, Malegaon, were screened for the 1st and 2nd degree of uterine prolapse on the basis of clinical signs and symptoms compatible with the classical description of the disease. The diagnosis of screened patients was however confirmed after ultrasonography of abdomen and pelvis. Thirty diagnosed patients of reproductive age group were included in the study after taking informed consent from them. They were informed about the disease, examination performed and type of treatment given.

The patients were treated with intravaginal tampon at bed time for 3 months except during menses. They were advised to follow up once a week for 3 months during treatment and once in 15 days for 1 month after treatment. The progress of each patient was recorded systematically in the case record form (CRF). At each visit the patients were carefully interviewed and their statement about the feeling of lack of support, sensation of something coming down per vagina, vaginal discharge, dyspareunia, frequency of micturition, stress incontinence and backache were recorded. After general and systemic examination each patient underwent per vaginal examination in lithotomy position to assess the degree of prolapse and the improvement if any. USG (ultrasonography) of abdomen and pelvis was carried out on first and last day of treatment to confirm the diagnosis and assess the improvement, respectively. The associated symptoms were graded on point scale \cite{15}. They were graded as none (-), mild (+), moderate (+++) and severe (++++) on per vaginal examination protrusion was also graded as none (0), 1st degree (I’), and 2nd degree (II’). The percentage decrease in scores was determined by comparing the baseline and post treatment scores. Finally, recorded findings were statistically analyzed using Chi square test.

**Results and Discussion**

The test drug was studied in the management of uterine prolapse by observing clinical signs and symptoms, per vaginal examination and ultra-sonographic studies. The findings of clinical features have been tabulated, analyzed and compared with the baseline findings (Table 1).

<table>
<thead>
<tr>
<th>Clinical Features</th>
<th>Baseline No %</th>
<th>Post Treatment No %</th>
<th>Improvement %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uterine Prolapse (Per vaginal)</td>
<td>30 100</td>
<td>19 63.33</td>
<td>11 36.66</td>
</tr>
<tr>
<td>Feeling of Lack of Support</td>
<td>30 100</td>
<td>19 63.33</td>
<td>11 36.66</td>
</tr>
<tr>
<td>Sensation of Something Coming Down</td>
<td>30 100</td>
<td>20 66.66</td>
<td>10 33.33</td>
</tr>
<tr>
<td>Vaginal Discharge</td>
<td>29 96.66</td>
<td>12 41.37</td>
<td>17 58.62</td>
</tr>
<tr>
<td>Dyspareunia</td>
<td>24 80.00</td>
<td>19 79.16</td>
<td>5 20.83</td>
</tr>
<tr>
<td>Frequency of Micturition</td>
<td>20 66.66</td>
<td>11 55.00</td>
<td>9 45.00</td>
</tr>
<tr>
<td>Stress Incontinence</td>
<td>13 43.33</td>
<td>11 84.61</td>
<td>2 15.38</td>
</tr>
<tr>
<td>Low Backache</td>
<td>25 83.33</td>
<td>18 72.00</td>
<td>7 28.00</td>
</tr>
</tbody>
</table>

On the day of registration per vaginal prolapse and feeling of lack of support were found in all (100%) the patients included in the study, while after treatment they were decreased and remained only in 63.33% of the patients and improvement was observed in 36.66% of the case. Sensation of something coming down on the day zero was found in 100% of the patients, whereas after treatment it reduced significantly and found only in 66.66% of the patients and an improvement in 33.33% of the case was observed. Prior to the treatment vaginal discharge was found in 96.66% of
the cases, which was found reduced significantly to 41.37% after treatment. An improvement in 58.62% of the cases was observed. On the day zero, dyspareunia was found in 80% of the patients, which reduced significantly after treatment and was found only in 79.16% of the patients showing improvement in 20.83% of the case. Prior to the treatment frequency of micturition was recorded in 66.66% of the patients, whereas after treatment it significantly reduced and found in 55% and an improvement was observed in 45% of the cases. Stress incontinence on day zero was found in 43.33% of the cases, which reduced significantly after treatment and was found in 84.61% of the patient. An improvement in 15.38% of the cases was recorded. Prior to the treatment, 83.33% of the cases were having the complaints of low backache, whereas after treatment it reduced significantly and found in 72% of the patients and improvement was observed in 28% of the cases.

Relief in clinical symptoms was considered as the criteria of efficacy. The cases having relief in per vaginal prolapse, feeling of lack of support and sensation of something coming down were rated as cured, whereas the patients having no relief in these symptoms were rated as not cured. Complete cure was observed in 36.66% patients. Other patients though were not cured completely but got significant symptomatic relief.

The radiological findings also suggested improvement in the prolapse as there was complete retrieval in certain cases while in majority of the cases sign of significant regression suggesting that the test drug is partially effective in correcting the prolapse. The test drug was found effective in relieving most of the symptoms. The effect may be attributed due to Qabiz, Habis, Majajif, Maqawwi and Mazaiyaq-e-Faraj properties of Tukhm-e-Tamar Hindi.[12,13] The results of the study revealed that the test drug is effective in 36.66% of the patients as the clinical features of uterine prolapse were found to be relieved completely in these patients. All the parameters were found to be significantly improved in 36.66% of the cases suggesting that the use of tampon in uterine prolapse is quite effective in sizeable number of patients. Other patients who were not cured completely were found to have symptomatic relief as some of the symptoms improved significantly indicating that the test drug at least has partial relief for all the patients. Uterine prolapse is considered a difficult ailment to be treated completely with drug. However, even a symptomatic relief is also considered important as it improves the quality of life significantly. Test drug by curing 36.66% of the patient and inducing partial relief to other patients indicated that it can be used in the management of uterine prolapse.

The study also revealed that uterine prolapse is more prevalent in the patients having Balghami Mizaj (70%). Therefore a combined therapy of tampon along with the oral administration of other drugs that can correct the qualitative and quantitative anomalies of phlegm may be recommended for a better result.

Conclusion
It can be concluded in the light of above findings and discussion, that tampon of Tamarindus indica Linn seed (Tukhm-e-Tamar Hindi) is effective in the management of 1st and 2nd degree of uterine prolapse (Nuttu-e-Rahem). Test drug is well tolerated by the patients without any side effects. Its cure rate is about 36.66%. However, for the exact mechanism of action of test drug, more elaborative and extensive studies should be done for further research.

References