

## Effects of *Hijamat bish Shart* in *Wajauz Zahr* (Low back pain) and associated disability

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*Wajauz Zahr* (Low back pain) is discomfort in the vicinity of the lower part of the back. *Hijamat bish Shart* (wet cupping) is a regimen prevailing in Unani System of Medicine to manage various pain conditions. The present study was on clinical study with sample size of 30 patients. Clinically diagnosed cases of *Wajauz Zahr* both males and females between 25-60 yrs of age were selected for the study after obtaining their written informed consent. Treatment protocol was followed for 30 days as per schedule and improvement in Oswestry disability index (ODI) was assessed before and after treatment. Mean $\pm$ SEM score before treatment was 30.93 $\pm$ 1.773 and after treatment it was reduced to 13.73 $\pm$ 1.058, which suggests highly significant improvement ( $p < 0.001$ ). The study revealed that the test procedure; *Hijamat bish Shart* has the potential in reducing *Wajauz Zahr*, without any adverse effect. Thus, it can be concluded that *Hijamat bish Shart* is safe and effective regimen in the management of *Wajauz Zahr*.

**Keywords:** *Wajauz Zahr*, Low back pain, *Hijamat bish Shart*, Unani System of Medicine, Cupping, Oswestry disability index

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*Wajauz Zahr* (Low back pain) is not a specific disease; rather it is a symptom that may occur from a variety of different processes. *Wajauz Zahr* is usually illustrated as discomfort in the *lumbosacral* region of the back that may or may not radiate. The pain may arise from a variety of causes and several individuals may never receive clear diagnosis for the reason of the pain<sup>1</sup>. In Unani System of Medicine, *Wajauz Zahr* is defined as a disease in which pain arises from interior and exterior muscles, ligaments surrounding the *lumbosacral* region. The causes are, *Sue Mizaj* (defect in temperament) due to excess *Buroodat* (coldness), *Balgham Kham* (raw phlegm) and *Riyah* (gas)<sup>2</sup>.

Low back pain is the most common pain symptom in developed countries with the highest incidence in persons aged 45-65 yrs. The commonest age groups affected are adults and elderly with the occurrence more amongst females. It has been reported that lifetime prevalence of LBP in developed countries is up to 80% which makes it second to the common cold<sup>3</sup>. The majority of these episodes of back pain are mild and short lived and have very little impact on daily life. Approximately 1% of the population are

permanently disabled by back pain at any given point of time, with another 1-2% temporarily disabled from their normal occupation. No one is resistant to this condition or its probable disability which does not distinguish by gender, age, race or culture<sup>4</sup>.

Interventions of *complementary* and *alternative* medicines have been rising in popularity over the past two decades due to the dissatisfaction with the main stream *western/allopathic* medicine and craving of patients to be more dynamically involved in their own therapeutic decision making. Everlasting elimination of pain has always been a difficult task. Every existing pain relieving regimen that is adopted in present days is only short term and exerts apparent and intolerable side effects. The effects of several frequently applied therapies remain extremely speculative. This is true for such popular treatments as *spinal fusion*, *chemonucleolysis*, *facet injection*, *denervation*, *transcutaneous electrical nerve stimulation*, *acupuncture*, *exercise*, *traction*, *manipulation* and so on<sup>3</sup>.

Contemporary management such as use of *NSAIDs* and *muscle relaxants* have their own limitations and dependency. *Bed rest*, *supportive corsets* and *braces*, which are being used customarily, are no longer advocated for back pain, as they are considered to

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restrict the muscles from providing the essential structural support and making them weak, which further deteriorate the condition<sup>5</sup>.

*Hijamat* (wet cupping) is a technique used for local evacuation or diversion of morbid *humors* in which a *singhi* (horn) is attached to the surface of skin of the diseased part through negative pressure<sup>6</sup>. *Hijamat* (wet cupping) with bloodletting (wet cupping/*Hijamat bish shart*) works according to the principle of *Tanqiya Mawad* (evacuation of morbid matters) from the affected area<sup>7</sup>.

There have been some published trials evaluating the effectiveness of *Hijamat bish Shart* for *Wajauz zahr*. The evidence for its efficacy is not well established because of methodological limitations and the scarcity of clinical trials. Keeping in view; precise, well designed trials are exclusively needed to evaluate the efficacy of *Hijamat bish Shart* in *Wajauz zahr*. The present study was designed to evaluate the efficacy of *Hijamat bish shart* in *Wajauz Zahr* (LBP) and associated disability.

### Materials and methods

This was an observational clinical study with sample size of 30 patients of *Wajauz Zahr* and was conducted at *Regimenal* Therapy Unit of the Hospital of National Institute of Unani Medicine, over a period of 7 months from December 2012 to June 2013. Patients who have completed the full course of protocol for a period of one month were assessed fortnightly (0, 15<sup>th</sup>, 30<sup>th</sup> day).

Before embarking upon the project a comprehensive protocol was chalked out and put forth for ethical clearance from Institutional Ethical Committee of National Institute of Unani Medicine, Bangalore on 18<sup>th</sup> April 2012. The study was approved with IEC No. NIUM/IEC/2011 TST/05-12/18/. Clinically diagnosed patients of *Wajauz Zahr* of either sex, age group 25-60 yrs, without any apparent structural abnormality were included in the study. Unstable, bed-ridden and mentally retarded patients, with history of trauma, severe anaemic patients, pregnant and lactating women and patients having wounds over the back and severe infections were excluded from the study. Patients fulfilling the inclusion criteria were asked to sign the written informed consent form.

### Procedure of *Hijamat bish shart*

The procedure, objectives and consequences of the technique were explained clearly to the patients prior

to treatment. The patients were called fortnightly as on 0<sup>th</sup>, 15<sup>th</sup> and 30<sup>th</sup> day for one month (3 sittings). Before intervention all necessary investigations like Hb%, BT, CT, Random Blood Sugar, HBsAg, HIV I & II were done on all eligible participants as a safety measure to ensure their range within normal limits. Under all aseptic conditions, patients were subjected to *Hijamat bish Shart* over the *lumbosacral* region. Four medium sized sterile suction cups were applied over *lumbosacral* region at the periphery of vertebral column and vacuum was created inside cups. After 3-5 minutes, cups were removed and multiple incisions (nearly 20 incisions) were given with the new sterile surgical blade No.12 on cupped area. Thereafter, cups were applied over the incised area to draw blood (25-30 ml) into the cups for 10-20 minutes<sup>8</sup>. After completion of the procedure, the dressing was done on incised area by antiseptic solution in order to prevent any infection. The patients were advised to remove the dressing on next day and clean the area by antiseptic solution and were advised to consult the investigator in case of any difficulty. The patients were also advised to get up slowly after the cupping session till next 24 hrs, avoid solid foods for 3 hrs, increase water intake up to 3 L and avoid sexual activity in next 24 hrs after cupping session.

### Assessment

The efficacy was assessed and statistically analysed after 30 days of procedure by Oswestry disability index (ODI) on base line and after treatment. Before starting the procedure, signs and symptoms were recorded in the case record form (CRF), according to their scores at first visit and any worsening or improvement in ODI was recorded at every visit of the follow up till the end of procedure.

The ODI score was used to measure disability due to *Wajauz Zahr*. The ODI consist of 10 components. Each component has 6 points rating scale and total scores varied from 0 to 50. The ODI score was calculated with formula, [(Total score/50)] 100. The ODI consist of *Pain Intensity, Personal Care, Lifting, Walking, Sitting, Standing, Sleeping, Sex Life* and *Travelling*.

### Statistical methods

Descriptive and inferential statistical analysis was carried out in the present study. Paired 't' test and *Chi-square* test ( $\chi^2$ ) were used. The Statistical software namely *Vassarstats* and *Gpad* were used for the analysis of the data and Microsoft word and Microsoft

Table 1—Oswestry Disability Index after and before treatment

Oswestry Disability Index(ODI)	Before treatment	After treatment	P value
Mean±SEM	30.9333±1.773	13.733±1.058	<0.01

Excel were used to generate tables. Results on continuous measurements are presented on Mean±SEM and results on categorical measurements were presented in Number (%). Level of significance is assessed at 5%.

### Observations and results

The mean age of patients was 37.83. Total 80% of patients were male and 80% patients were married. Occupationally all the patients belong to hard working profession which causes continuous *postural strain* over back. Among all, 73% of patients belong to upper lower class with reference to SES.

Before *Hijamat bish Shart* (wet cupping) it was found that the mean ODI score was 30.9333 and after treatment, it was reduced to 13.733. This reduction in ODI score was found significant ( $p < 0.01$ ) when the two mean scores were analyzed using paired 't' test (Table 1).

The data were also analyzed using *chi square* test ( $\chi^2$ ) and it was observed that there was significant reduction in severity of disability in the treated patients (55.60%).

### Discussion

Oswestry Disability Index (ODI) score was examined for the severity of disability. The analysis was made by using paired 't' test and *chi square* test. Both parametric and non parametric tests were applied in the present study to increase the reliability of data.

It was found that before treatment 5 patients were having severe disability, 19 patients were having moderate disability and 6 patients were having mild disability. After treatment, no patient was found with severe disability, 3 patients were found with moderate disability and 27 patients were found with mild disability. When the paired 't' test and *chi square* test ( $\chi^2$ ) were applied, the result showed highly significance in reducing the extent of disability. On the baseline mean ODI score was 30.933 and after treatment the ODI score was 13.733 ( $p < 0.01$ ).

According to Unani system of medicine, the pain and tenderness in *Wajauz zahr* originates due to the accumulation of *Akhalat fasida* (morbid matters) mainly *Ghayr tabyi balgham* (raw phlegm) in the

joint structures of *lumbosacral* region. The pain fibres are located in the structure of *lumbosacral* region like *capsules, tendons, ligaments* and *blood vessels*, etc. Thus the pressure exerted on these structures evokes pain and tenderness. The basic treatment for the accumulation of *Akhalat fasida* (morbid matters) and *Riyah* (gas) is *Istifragh* (evacuation) of the *Madda* (matter) as per Unani principle<sup>2,9</sup>.

Thus it may be stated that the overall observed effect of study was due to *Istifragh* and *Tanqia mawad* (evacuation of morbid matters) of *viscid, sticky matters*, removal of *Buroodat* (coldness) and *Riyah* (gas) from the joint structures of *lumbosacral* region. These findings were in conformity with description of *Razi* and *Ibn Sina*<sup>10,11</sup>. The significant results of the present study coincides with the studies conducted by *Hanan et al.*,<sup>1</sup> *Khosro et al.*,<sup>8</sup> *Shahraki et al.*,<sup>12</sup> *Jong et al.*,<sup>13</sup> and *Sayed et al.*,<sup>14</sup> in which *Hijamat bish shart* was found effective in relieving back pain and prevents the disability in patients of *Wajauz zahr*. The evidence-based *Taibah* mechanism (*Taibah* theory) explained the therapeutic benefits of *Hijamat bish shart* through clearing blood and interstitial spaces from noxious substances, causative pathological substances, pain causing substances and pain-related substances.

The physiological mechanism through which *Hijamat bish Shart* (wet cupping) might function remains unknown. Recently, the evidence-based *Taibah* mechanism (*Taibah* theory) explained the medical bases and therapeutic benefits of *Hijamat bish shart* (including the analgesic effect) through clearing blood (through skin circulation) and interstitial spaces (at the areas for sucking cups application) from causative pathological substances including pain-causing and pain-related substances<sup>14</sup>. It has been suggested that the wet cupping is the process of transferring discomfort and even pathology from one site to another that may cure the original site of any diseases process<sup>8</sup>. One theory suggests that it is by increasing circulation around the area of cupping, which eliminate the toxins trapped in the tissues<sup>8,14</sup>.

Interestingly, wet cupping therapy was reported to decrease *serum concentrations* of *substance-P* (pain-related pathway), which confirms the *anti-nociceptive* effect of wet cupping<sup>15</sup>. *Hijamat bish shart* is also called the triple S technique as it includes *skin suction, scarification* and *suction* that are more comprehensive and better therapeutically than the *double S technique* (traditional wet cupping therapy)

that includes skin *suction* and *scarification*. Confirmatory to that in the current study, *Hijamat bish shart* dramatically improved low back pain and associated disability by more than 55% [=100 X (30.9333-13.73)], which was quite better than the outcome of a similar study that treated low back pain using traditional wet cupping therapy where there was no significant difference between the group who received traditional wet cupping and the waiting-list group<sup>12</sup>. This confirms the superiority of *Hijamat bish shart* over traditional wet cupping therapy<sup>16</sup>.

No adverse events were reported in this study which suggests that the procedure is safe when practised with all aseptic techniques and pre-procedural investigations. It has been suggested that the effects of *Hijamat bish Shart* (wet cupping) can be divided into several components, including *neural, haematological, immune* and *psychological* effects<sup>8</sup>. Various theories have been put forth for the benefits of the wet cupping therapy. One theory suggests that *Hijamat bish Shart* (wet cupping) acts by increasing circulation around the area and eliminate the toxins trapped in the tissues<sup>7,14</sup>.

### Conclusion

It may be concluded that *Hijamat bish Shart* is very useful in relieving *wajauz zahr* and associated disability and has a clear cut edge over other regimens. The limitations inherent in this study include small sample size, short duration of study and non-inclusion of oral and massage therapy. Hence, it is recommended that further studies are needed with modified methodology to overcome these limitations for wider reliability and acceptability.

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