



## SOLID DOSAGE FORMS IN UNANI SYSTEM OF MEDICINE: AN OVERVIEW

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### ABSTRACT

Drugs obtained from natural sources are rarely administered or dispensed to patients in their native forms but are formulated into dosage forms. In Unani system of medicine dosage forms are broadly classified into four categories according to their state these are solid dosage forms, semisolid, liquid and gaseous dosage forms. Among them solid dosage forms e.g. *Sufoof* (powder), *Kohal* (coryllium), *Kushta* (calx), *Qurs* (tablet) etc have several advantages over other dosage forms such as higher stability, easy to carry, better patient compliance. The rate of absorption of a formulation depends on the dosage form, route of administration and particle size. Some solid dosage forms like *shiyaf* (suppository), *zarur* (dusting powder), *noorah* (depilatory) are used locally to produce their respective actions. But unfortunately some effective and potent dosage forms are neither used nor manufactured and they are near to extinct. Therefore in the present review an effort has been made to summarize the detailed Unani classical literature of solid dosage forms.

**Key words:** Dosage forms, Ghaza, Habb, Shiyaf, Sufoof, Unani

### INTRODUCTION

Unani system of medicine originated from Greece. Hippocrates (460-377 BC) was the ancient Greek philosopher-physician who freed Medicine from the sphere of magic and superstition. The fundamentals of Unani Medicine are based on his teachings. After Hippocrates, a number of other Greek scholars enriched the system significantly. Among them, Galen (131 – 210 AD) was the one who strengthened its foundation, on which Arab physicians like Rhazes (850 – 1037 AD) and Avicenna constructed a huge and magnificent structure.<sup>1</sup> Galen was the first to devise solutions of the active constituents of plants, hence the term “Galenicals”. True galenicals are pharmaceutical preparations obtained by macerating or percolating crude drugs with alcohol or some other solvent (menstrum), to remove as completely as possible only the desired active components, leaving the inert and other undesirable constituents of the plant in the solid phase (marc). But today, the term ‘galenicals’ is applied loosely, and often incorrectly, to any type of preparation (elixirs, solutions, waters, etc.) irrespective of whether it is an extract of a crude drug or a solution of chemicals.<sup>2</sup> Since that time, Greek and Arab physicians have tried to improve the Galen’s techniques and also discovered new dosage forms according to need. Drugs obtained from plant, animal and mineral are rarely administered or dispensed to patients in their crude forms but are formulated into dosage forms that ensure reproducibility of products quality, accurate dosage, predictive therapeutic response, convenience of prescription and administration as well as compliance with usage directive by the patient.<sup>3</sup> Due to the immense work done by the ancient physicians and philosophers in the field of pharmacy Unani Pharmacopoeias are filled with nearly about 60 different types of dosage forms, but unfortunately now a day’s nearly about 20 dosage forms are into vogue.

In Unani system of medicine dosage forms are broadly classified into four categories according to their state these are solid dosage forms eg. *Habb* (pills), *qurs* (tablet), *sufoof*

(powder), semisolid dosage forms (eg. *Majoon*, *jawarish*, *itrifal* etc), liquid dosage forms eg. *Sharbat* (syrup), *sikanjabeen*, *arq* (distillate) etc and gaseous dosage forms eg. *Bakhur*, *shamoom*, *inkebab* etc.

### Need for Dosage Forms

Besides providing the mechanism for the safe and convenient delivery of accurate dose, dosage forms are needed for additional reasons:

- To protect the drug substance from the destructive influences of atmospheric oxygen or humidity (coated tablets, sealed ampoules).
- To protect the drug substance from the destructive influence of gastric acid after oral administration (enteric-coated tablets).
- To conceal the bitter, salty or offensive taste or odour of a drug substance (capsules, coated tablets, flavored syrups).
- To provide liquid preparations of substances that are either insoluble or unstable in the desired vehicle (suspensions).
- To provide rate-controlled drug action (various controlled-release tablets, capsules, and suspensions).
- To provide optimal drug action from topical administration sites (ointments, creams, transdermal patches, ophthalmic, ear, and nasal preparations).
- To provide for insertion of a drug into one of the body orifices (rectal or vaginal suppositories).
- To provide for placement of drugs directly in the bloodstream or body tissues (injections).
- To provide for optimal drug action through inhalation therapy (inhalants and inhalation aerosols).

### Commonly used solid dosage forms are:

#### SUFOOF (Powder)

*Sufoof* are the fine powder forms of medicinal preparations made of plant, animal and mineral origin drugs. These are used internally as well as externally. *Sufoof* is also known as *churan* and *phanki*. “*Churan*” is an Ayurvedic word applied

to that *sufoof* in which inorganic salts are incorporated as the main ingredients and is basically digestive.<sup>4</sup> The term *sufoof* is mainly used for those powders which are used internally but some externally used powders also prefix with term “*sufoof*” like *Sufoof Kharish* and *Sufoof Burg Hina Wala*. The powders used for external application have their specific terminologies.

### Historical background

In ancient times the leaves, barks, fruits, roots etc. of the plants were chewed for medicinal purpose or were consumed after the expression of their juices or aqueous extract, with or without sieving. According to the tradition of the ancient hakims, Aristotle has been credited with the discovery of *sufoof*<sup>4</sup> but in *Qarabadeen Ehsani* it is mentioned that it is the first dosage form to be invented by the Hippocrates, which was the student of *Asqlenoos* and not the Hippocrates who enjoys the same period as Alexander and known as Father of Medicine.<sup>5</sup>

### Classical Method of preparation

For the preparation of various compound formulations like *Majoon*, *Jawarish*, *Habb* etc single drugs are used in the form of coarse or fine *sufoof* (powder). *Daq-wa-Sahaq* is the process of powdering the drugs by pounding or grinding (*Daq* or *Kootna* means pounding and *Sahaq* or *Peesna* means grinding).

Drugs are generally powdered in a mortar and pestle, made of stone, iron, wood, porcelain or glass. In large scale manufacture of drugs, pulverizing machines are now used.

### Kharal (Mortar and Pestle)

It is essential to give a brief introduction of different types of *kharal* (mortar and pestle) because it is the most frequently used utensil in Unani pharmacies for small-scale comminution of drugs.

Mortars and pestles are used to:

- Reduce the particle size of powders
- Grind crystals into powder form
- Mix powders
- Mix powders and liquids
- Make emulsions.
- Mortar is the bowl and the pestle is the pounding/shearing/grinding implement

In Unani pharmacy following types of mortar and pestle are used:

### Stone Mortar and Pestle

*Kharal* made up of hard stones are classically used to grind precious stones. Classical stone mortar are boat shaped and the movement of pestle is to and fro.

### Iron Mortar and Pestle

*Kharal* made up of iron is used to pound hard drugs like bark, root and wood.

### Glass Mortar and Pestle

The surfaces of a glass mortar and its pestle are very smooth, making them less suitable for size reduction of powders, although they are efficient when grinding crystals into powder form. Glass mortars are particularly useful when dissolving small amounts of medicament or when incorporating substances that are absorbed by and stain porcelain mortars (e.g. *Crocus sativus*).<sup>2</sup>

### Porcelain Mortar and Pestle

They are ideal for the size reduction of powders, for mixing powders with other powders, for mixing powders with liquids, and for the preparation of emulsions.

The most effective way to use the pestle is to start in the centre of the mortar and make a circular motion on the powder, gradually increasing the diameter of the circle with each revolution until the sides of the mortar are touched, then reverse the process, making the circles smaller with each revolution until the centre is reached again. Repeat the process until the powder size is suitably reduced.<sup>2</sup>

Mortars and pestles need to be matched. The use of a round headed pestle in a flat bottomed mortar or a flat headed pestle in a round bottomed mortar is very inefficient and frustrating as the required result will either not be achieved or will take a comparatively long time to achieve.

### (i) Powdering of hard drugs

Tough, hard or fibrous drugs like roots, wood, bark etc are first dried to evaporate their moisture contents and pounded in an iron mortar. Initially, gentle pounding is employed to break the drugs into small pieces then vigorous pounding is done till they are finally powdered. Then powder is sieved through sieves of the prescribed meshes. The coarse particles left in the sieve are again pounded and re-sieved. The remaining drug which can no longer be pounded are ground with a little water on a *sil-batta* to form a fine paste which is then dried and ground to powder form in a porcelain or glass mortar.<sup>6</sup>

### (ii) Powdering of precious stones

Precious stones like *Yaqoot Surkh* (Ruby), *Aqeeq* (Agate), *zamarrud* (Emerald) are first pounded in an iron mortar or *Kharal* of hard stone and then sieved through sieves of 100 Mesh. The sieved powder is put in the same mortar or *Kharal* and ground with *araq-e-Gulab* (distillate of rose) or *araq-e-kewra* (distillate of screw pine) or *araq-e-baid mushk* (distillate of musk willow) till the *araq* is completely absorbed. The powder is then tested between the fingers for its fineness. If coarseness is still felt, more *Araq* is added and ground till the coarseness disappears. The fine powder is then sieved through a piece of fine muslin cloth.

### (iii) Powdering of Mushk (*Moschus moschiferous*), Amber (*Ambra grasea*)

Drugs like *Mushk* (*Moschus moschiferous*), *Ambar* (*Ambra grasea*), *Jund Bedaster* (*Castor canadensis*) etc, are ground with a suitable *Araq* and then used as required in the respective formula.<sup>6</sup>

### (iv) Powdering of Zafran (*Crocus sativus*)

*Zafran* (*Crocus sativus*) is ground only in a dry mortar (*Kharal*), with slow and light movements of the pestle if to be incorporated in dry formulations like *sufoof*. But if incorporated in *majoon* or *jawarish* it should be triturated with a little quantity of *araq-e-gulab* (distillate of rose) and then add in formulation.

### (v) Powdering of Kuchla (*Nux vomica*)

As *Kuchla* (*Nux vomica*) is a hard (difficult to powder) and toxic drug it should be first purified or detoxicated (*mudabbar*) and ground immediately when it is soft. Usually saw dust of *kuchla* is used. Other drugs of which saw dust is used are iron, *Elephus maximus* tusks, sandalwood etc.<sup>4</sup>

#### (vi) Powdering of moist and resinous drugs.

Drugs like Afyun (*Papaver somniferum*), Muqil (*Commiphora mukul*), Narjeel Daryae (*Lodoicea maldivica*) etc, are first dried over a low fire to evaporate the moisture content, care being taken to ensure that they are not burnt. They are then ground in a mortar to fine powder form.

#### (vii) Powdering of Mastagi (*Pistacia lentiscus*)

Mastagi (*Pistacia lentiscus*) is powdered in a procelain mortar by slow and light motion. It will stick to the mortar and pestle if powdered harshly due to heat produced by friction. It can also be dissolved in any oil over a low fire and added to the other drugs in the formula.

#### (viii) Powdering of Tukhm-e-Imli (*Tamarindus indica*)

Seeds of *Tamarindus indica* (Tukhm-e-Imli) are first roasted in sand and after removing the outer covering kernel are powdered<sup>4</sup> or seeds are soaked in water for four to five days. The brownish outer covering (testa) of the seeds is removed and the seeds are ground to powder.

#### Externally Used Sufoof (Powders)

##### Sunoon or Manjan (Tooth Powder)

*Sunoon* is a type of *sufoof* (powder) which is used for the cleaning of teeth (as a dentifrice) and maintains oral hygiene. It may be prepared in the form of bulk powder, generally containing drugs having abrasive (e.g charcoal of *Bambusa arundinacea*), astringent (Roasted alum, Oak galls) and anticariogenic activity (*Azadirachta indica*, *Curcuma longa*). Generally it is advised to rub the *sunoon* on teeth with the help of finger or brush before bed-time or as per need. *Sunoon* works as dental root strengthener, gum tonic, impart sparkle to the teeth, remedy for swollen gums and toothache.

#### Method of Preparation

The ingredients are ground, sieved through 100 mesh, and stocked in a glass jar.

#### Kohal and Barood

According to National Formulary of Unani Medicine (NFUM) Kohal and Barood shares the same definition that is "Kohal (*barood*) is the finest form of medicinal preparations used externally to strengthen eye sight and to cure other eye ailments".<sup>7</sup> But in classical literature these two dosage forms have different identity.

#### Barood

*Barood* is a microfine powder for ophthalmic use. The word *barood* means "cooling". In the beginning, the formulae of *barood* had only those drugs (mainly camphor)<sup>8</sup> which imparts cooling effect on eye, subsequently the drugs which do not have any cooling effect had also incorporated to the formulae of *barood*.<sup>9</sup> Due to their cooling property they are mainly used for the inflammatory conditions of eye. It was invented by *Salyanoos*.<sup>9,10</sup> Galen stated that it is better to apply *barood* by using collyrium stick made up of gold.<sup>8</sup> *Barood* are mainly in the form of fine powder, but in *Alqarabadeen* thick viscous *barood* having syrupy consistency is also mentioned by the name "*Barood Rumman*". As mentioned that *barood* is mainly used for different eye ailments, but some formulae of *barood* are indicated in stomatitis, oral ulcers and for strengthening of teeth.<sup>8,10</sup> Various formulae of *Barood* are also mentioned in

*Kamilus Sana* which are used in the inflammation of eye and have cooling effect, most of them contain camphor.<sup>11</sup>

#### General Method of Preparation

Dry ingredients of the formula are ground and sieved separately through a sieve No. 120, then add camphor (if mentioned in formula) and mix the fine powder of the entire drugs well. To make the powder more fine constituents are again pulverized in aqua *Rosa damascena* or any suitable liquid as mentioned in formula till the latter dries. Filtered through fine muslin cloth (which contains 22 warp/ cm and 18 weft/ cm)<sup>12</sup> and store in glass or china clay bottle.

#### General Precautions

*Barood* should be ground and sieved to the finest degree of powder form, otherwise it may irritate the eye and worsen the condition.

#### Characteristics

When touched with fingers, *Barood* should not give the feel of coarseness.

#### Storage

*Barood* is stored in well stopper glass or china clay bottle at clean and dry place.

#### Kohal (Collyriums)

*Kohal* is an Arabic word and in Persian it is termed as *Surma*.<sup>8</sup> It is a special type of *sufoof* which is in the form of very fine powder, applied externally and is especially meant for ocular treatment. Usually it is applied in the form of *sufoof* to the eye directly by means of a collyrium stick but some *kohal* are mixed with water or appropriate liquid before application as in case of *Kohal Chikni Dawa*. *Sang-e-Surma* (Antimony) is the basic ingredient of *Kohal*, but its presence in formula is not necessary. *Kohal* are mainly used as a tonic for eye, improves eye sight, remove soreness and redness of eye. Some specialized *kohal* are indicated for other eye ailments like incipient cataract, pterygium, xerophthalmia etc. It is believed that *kohal* were invented by Pythagoras.<sup>13</sup>

#### Method of Preparation

*Sang-e-Surma* (Antimony) is ground in mortar and pestle. The process of powdering is continued till the shine of the particles disappears and the powder is tested between the fingers for its fineness. If it is still coarse then the process is repeated till the highest degree of fineness for which it is sieved through a piece of fine muslin cloth to obtain the finest quality of *Surma*.

#### General Precautions

*Kohal* (*Surma*) should be ground and sieved to the finest degree of powder form, otherwise it may irritate the eye and worsen the condition.

#### Characteristics

When touched with fingers *Kohal* (*Surma*) should not give the feel of coarseness.

#### Storage

*Kohal* (*Surma*) is stored in well stoppered glass bottles, phials and other glass containers at clean and dry places. It can also be preserved for a longer period under hygienic conditions.

### Zarur (Dusting powder)

*Zarur* is a type of *sufuof* (powder) which is applied (sprayed or sprinkled) locally over wounds, oral ulcer, boils or pustules and is intended to have no systemic action. Hindi equivalent of *zarur* is *burki*.<sup>4</sup> In the beginning *zarur* is mainly sprinkled over wounds to stop bleeding and healing but now a day it is applied to various parts of the body as lubricant, protective, absorbent, antiseptic, antipruritic, astringent and antiperspirant.

In chapter 24<sup>th</sup> of *Kamilus Sana* vol 2 many formulae of *zarur* are mentioned which act as a wound healer and haemostat. *Zarur* is also mentioned in *Al Qanoon* for the treatment of various eye ailments.<sup>14</sup>

### Method of Preparation

For the preparation of *Zarur* the raw drugs should be ground and sieved to the finest degree of powder form.

### General Precautions

*Zarur* should be ground to the fine degree of powder form and pass through 120 no mesh. *Zarur* of bigger particle may irritate the wound. Care should be taken that raw material used for the manufacturing of *Zarur* is free from bacterial spores.

### Characteristics

When touched with fingers, *Zarur* should not give the feel of coarseness.

### Storage

*Zarur* is stored in well stopper glass bottles, phials and other glass containers at clean and dry places. It can also be preserved for a longer period under hygienic conditions.

### Nufookh (Insufflation)

*Nufookh* is the finely powdered drug which is insufflated with the help of tube in nose, throat or any other opening of the body or the patient can inhale itself. It is also known as *Naas* or *Hulas*. It is used to treat various disease conditions but when insufflated in nose it relieve headache due to cold and migraine. For the treatment of uvula insufflated in throat.<sup>10</sup>

### Ghaza (Face powder)

It is a fine perfumed powder which is used to make the skin of face soft and bright.<sup>15</sup> It is used directly on skin in powder form or may be mixed with water or rose water and apply in the form of thin paste on face at bed time and washed off next morning.

### Ghalia (Perfumed body powder)

According to the classical pharmacopoeias like *Alqarabadeen* and *Qarabadeen Ehsani* *Ghalia* is a dry powdered mixture of some perfumed single drugs which is used to smell or applied on a part of body or on whole body.<sup>5,10</sup> It is not used only for the cosmetic purpose, various formulae of *ghalia* are prescribed in classical texts as cardiac and brain tonic.<sup>10</sup>

### Noorah (Hair Remover)

It is a specialized type of *Sufuof* (powder) which is used for degradation of the unwanted hairs chemically without affecting the skin. It is mixed with water to form thin paste and applied on the desired skin part from where the hairs are to be removed and left for some time (as mentioned), then

washed with warm water. It removes the hair at the neck of hair follicle and thus has advantage over razor shaver which removes hair on a level with the surface of the epidermis.<sup>16</sup> *Chuna* (Calcium carbonate/caustic lime), *Hartal* (Arsenic trisulphidum), *Sufeda* (Zinc oxide/plumbi carbonas) are the common ingredients used in the formulae of *Noorah*.<sup>4</sup>

### Precaution

As the pH of *Noorah* is high it may cause dermatitis, therefore the user should be advised to make a reaction test on a part of her (or his) arm which is devoid of hair, by applying a little of *Noorah* and leave it for few minutes and observe any allergic reaction.

### Historical Background

Removal of unwanted hairs has been practice from thousands of years ago. Egyptian women of that time knew how to remove hair from legs and arms. *Rhusma*, a mixture of quick lime and arsenical pyrite (ratio 1:2) are one of the earliest substances reported to be used by Egyptians to remove hairs.<sup>16</sup>

### Atoos (Errhine)

*Atoos* is a very fine powder which is snuffed in nose to induce sneezing. According to Unani fundamentals *atoos* should be used after the complete *nuzuj* of matter and contraindicated in case of *imtala*.<sup>8</sup> It is used to treat various phlegmatic disorders of brain. The drugs commonly used as *atoos* are *Nakchikni* (*Centipeda minima*), dried *Zingiber officinalis*, *Tambaku* (*Nicotiana tabacum*) etc.<sup>17</sup>

### Habb (Pills)

*Habb* is an Arabic word whose literal meaning is round seed, but in technical meaning *Habb* is a small, round and uniformly shaped medicinal preparation. It is formed by the mixing of dried powdered drug with the liquid matter to form proper dough like mass and then spherical shaped unit dosage forms are prepared from that dough. In Classical literature *habb* of different sizes e.g. pea, gram, black pepper and moong are mentioned.

Size and weight of *huboob* and *aqras* vary and weigh from one tenth of a gram to one gram.<sup>18</sup> Drugs having dose in milligrams,<sup>19</sup> bad taste and odour are made into pills so that they cannot be weight each time before administration and easily swallowed.<sup>8</sup>

### Historical Background

It is believed that *Seelon* (maternal ancestor of Plato) is the inventor of *Habb*. But *Hakeem Luqman* as the inventor of *Habb* is also claimed by some Unani physicians.<sup>20</sup>

### General Method of Preparation (Classical)

- The *sufuof* from which the *habb* are made should be as fine as possible.
- All the drugs are ground separately, mixed and sieved through 80 mesh.
- *Mazhziyat* (Kernels) are also ground separately and sieved through 60 mesh.
- Mix all the *sufuof* and kneaded in the water or *arq* (or other solvent as written in *nuskha*).
- Make long sticks of the kneaded drug manually or by sticks making machine.
- Put sticks in pill making machine.

### Banadiq

It is a pill of bigger size having weight about 4 gm.<sup>13</sup> At the time of administration it is divided into pieces and taken orally.<sup>8</sup> *Banadiq* are bigger forms of *huboob* and weigh from one to three gram. But *banadiq* of small doses are also mentioned e.g. *Banadiq Kunduri* dose 500mg- 1gm.<sup>7</sup>

### Qurs (Tablet)

*Qurs* is an Arabic word which means flattened disc. It is a type of pill which is flat in shape unlike pills which are round. It is believed to be invented by *Andromakhas II*.<sup>13</sup> Numerous formulae of *Qurs* are also mentioned in *Al Qanoon*. Now a days *Qurs* are made with the help of tablet punching machine which involves the compression of granules or powders into the required geometry.

### Advantages of Qurs

- Tablets are convenient to use and are an elegant dosage form.
- It is easier to mask the taste of bitter drugs using tablets than for other dosage forms e.g. liquids.
- The chemical, physical and microbiological stability of tablet dosage forms is superior to other dosage forms.

### KUSHTA (Calx)

The word *Kushta* is derived from a Persian word *Kushtan* which mean to kill or conquered<sup>4</sup>. In Unani system term *Kushta* is employed for a medicine which is obtained in powder form by the specialized process of calcination in which metals, minerals or animal origin drugs are treated with the juices of herbs and burnt under special conditions. This term may also be used for those medicine which are used in small quantities and are immediately effective. The preparation of *kushta* results in the higher efficacy of the medicine and after its entry into the body, it discharges its curative role promptly and effectively.<sup>4</sup> Now a days many Unani pharmaceutical companies are making tablets of *Kushta* by employing diluents in the formulation of tablets to increase the mass of the tablets because *kushta* is used in very low concentration and thereby render the manufacturing process more reliable and reproducible.

### Historical Background

Ancient Unani physicians used certain metals, such as salts or oxides of copper and lead to treat various diseases.<sup>21</sup> It is also proved by the quote of Galen in which he suggested that copper should burnt before its use and the efficacy of burnt lead is unparallel in cancer<sup>22</sup>. Geber (b.831. A.D) who was an Islamic Alchemist, had mentioned the use and method of preparing various calx like Calx of Iron (*faulad*), Tin (*qalai*), Ammonium Chloride (*naushadar*) and Mica (*abrak*) in his book '*Nakhbe Jabri*'.<sup>23</sup> Rhazes and Avicenna also wrote books "*Kitab ul Akseer*" and *Risaiala fi al Hikmah al Mastoorah*" (*Kitab al Taklees*) on calcination respectively.<sup>24</sup> In most of the classical Unani literature like *Firdausul Hikmat*<sup>25</sup> *Kamilus Sana*<sup>11</sup> *Tohfatul Momineen*<sup>26</sup> *Qarabadeen Qadri*<sup>9</sup> and *Zakhira Khwarzam Shahi*<sup>27</sup> the burning process of drugs (*Ihraq*) is mentioned.

### Advantage of Kushta

- Highly efficacious in low doses.
- More stable than other dosage forms.
- Easily taken by patients in which large doses are contraindicated.

- In comparison to other dosage forms its use is easy.

### Shiyaf (Suppositories)

*Shiyaf* is a plural of *Shafa* which is a solid dosage form having special shapes (cylindrical, conical, tapered at one or both end or rounded) meant for insertion into body cavities other than mouth or applied after rubbing it with a few drops water or a suitable vehicle and apply to the eye with the help of collyrium stick. *Shiyaf* is a dosage form of pre-Hippocratic period but some claims that it was invented by Hippocrates.<sup>13</sup> In ancient times the word *Shiyaf* was specifically used only for a dosage form meant for eye ailments but later this term is used for the all suppositories applied to the external cavities of the body, e.g. nostrils, ears, rectum, urogenital tract.

### Classical method of preparation

The ingredients of the formula are finely powdered and sieved through cloth, then kneaded in a suitable vehicle (water or arq) in which some binder like *samagh arbi* (Acacia), *kateera* (tragacanth) or egg white is also incorporated, then make them into special shapes (cylindrical, cone etc) and dry properly. The size of *shiyaf* should be equivalent to the barley grain if used in eye diseases<sup>4</sup>.

*Shiyaf* are used to produce local action. It is used in the following conditions:

- Eye: It is used to relieve ocular soreness and irritation e.g. *Shiyaf Abyaz*. Some are especially effective against granular conjunctivitis e.g. *Shiyaf Aksir Chasham*.
- Wounds: *Shiyaf* smaller to the size of wound is kept in wound so that medicaments will release slowly and continuously for longer time.
- Rectum: *Shiyaf* are extensively used to evacuate the bowel especially in children. Also used in diseases like colitis, hemorrhoids.<sup>10</sup>
- Vagina: *Shiyaf* is inserted in vagina for various gynecological diseases.
- Ear: *Shiyaf* is used in various diseases of ear like deafness, otorrhoea.<sup>10</sup>
- Nose: *Shiyaf* is used in various diseases of nose like nasal polyp.<sup>10</sup>
- Urethra: *Shiyaf* is also used in various diseases of urethra like urethritis.<sup>10</sup>

### CONCLUSION

Pharmacy as a separate entity from medicine was recognized by the ninth century under the patronage of the early Abbasiyyah caliphs in Baghdad. By this early rise and development of professional pharmacy in Islam Unani system is enriched with wide variety of dosage forms, among them solid dosage forms have unique identity. But unfortunately various potent and effective dosage forms like *Shiyaf*, *Ghaza*, *Ghalia*, *Noorah* etc are not in vogue because they are not manufactured by Unani pharmaceutical companies. If the same will continue for some more years, then our upcoming generations will forget them and these dosage forms will become history. So it is the need of hour to review the left over dosage forms and help humanity.

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