



Received on 18 July 2018; received in revised form, 12 October 2018; accepted, 19 November 2018; published 01 April 2019

RECENT TREND IN TRADITIONAL MEDICINE DOSAGE FORM AND PRESENT STATUS OF UNANI AND AYURVEDIC MEDICINE

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Keywords:

Recent-trends, Traditional, Dosage-form, Unani, Ayurvedic

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ABSTRACT: Traditional medicine is finding more significance and application today, particularly when we are facing difficulty in the management of numerous medical conditions. More effective and palatable drug dosage forms are needed in the modern era. The recent trend in traditional medicine dosage forms is to enhance the solubility, bioavailability, pharmacological activity, stability, reduce the toxicity and increase the compliance, *etc.* Oral dosage form which can address these factors are granules (effervescent and rapid release granules), tablets (fast dissolving and rapid disintegrating tablet), capsules, suspension, syrups, *etc.* and topical dosage form includes toothpaste, natural hair dye, face pack, hand wash, liniment spray and roll-on, gel, creams (emulsion), shampoo, *etc.* Contemporary, traditional pharmacies including several Ayurvedic pharmacies have already implemented these new trends and launched several new dosage forms apart from traditional under cover of conventional knowledge; few of such Unani products have also been launched. There is an immense need to adopt these recent trends in respect of the dosage form in Unani and another Indian traditional medicine pharmacy for adaptation on Global scenario.

INTRODUCTION: There are almost as many forms of traditional medicine as there are cultures so do the dosage form¹. The use of traditional medicine is increasingly finding more relevance today, especially with the recognition that we are facing challenges in the treatment of several medical conditions. More effective and palatable drug dosage forms are needed in the contemporary era. It is a known fact that any medicine cannot advance without addressing the issues related to dosage form and drug development.

There is a need to readdress the dosage form in Unani medicine. Our genetic legacy is tremendous concerning the dosage form used in Unani medicine. Time has come to revisit a few of our dosage form with modification and addition of new in it. These changes are essential due to evolution in human being and lifestyle adopted by the masses in the present era. This work explores the current trend in the traditional medicine dosage form and present status of Unani medicine.

Need and Advantage of Advancement in Traditional Medicine Dosage Form:

The use of herbal medicine is increasingly finding more relevance today, especially with the recognition that we are facing more challenges in the treatment of some medical conditions such as diabetes and cancer. So, more effective and palatable drug dosage forms are needed in modern era².

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| <p>QUICK RESPONSE CODE</p>  | <p>DOI: 10.13040/IJPSR.0975-8232.10(4).1640-49</p> <p>The article can be accessed online on www.ijpsr.com</p> |
| <p>DOI link: http://dx.doi.org/10.13040/IJPSR.0975-8232.10(4).1640-49</p> | |

Similarly, several Unani formulations effective in various ailments and diseases also need modification in this regard. Advantages of adopting recent trend in traditional medicine dosage forms are enhancement of solubility and bioavailability, protection from toxicity, enhancement of pharmacological activity, enhancement of stability, improving tissue macrophages distribution, sustained drug delivery system, increased compliance, less total drug administration, an increased outcome from the patient³.

Innovations which can be adopted in Unani and Ayurvedic Medicine:

Incorporation of Crude Extract in the Dosage Form: The product obtained by removal of the active constituents from animal or herbal drugs, with a suitable solvent or mixture of solvents, is called extract. These are concentrated preparations having only active constituents⁴. Traditionally extracts are meant for crude extract, which contains various metabolites, such as alkaloids, flavonoids, glycosides, terpenoids, etc.⁵ Solid extracts are the completely dried fluid extracts, such as liquorices solid extract⁶. Advantages of extracts are that they have soluble plant metabolites. Extracts do not contain, impure substances, unwanted semisolids, and powders. So, the dose is reduced to a considerable extent. These extract having only active constituents may be incorporated in dosage form, such as tablets and capsules⁵.

Novel Drug Delivery System: Novel drug delivery system is a novel approach to drug delivery that addresses the limitations of the traditional drug delivery systems. Novel drug delivery system attempts to eliminate all the disadvantages associated with conventional drug delivery systems. Its advantage is that the efficacy of the drug is enhanced, patient compliance is increased, and avoidance of repeated administration of drug and therapeutic value of the drug is increased by reducing toxicity and increasing the bioavailability, etc.⁷

Recent Trends in Traditional Medicine Dosage Forms, Which is to be Utilized in Unani Medicine: Oral Dosage Forms:

Granules: The term granule is derived from the Latin word *granulatum*, meaning grain⁸. Advantages of granules formulation are to increase

the uniformity of drug distribution in the product, to densify the material, to enhance the flow rates and rate of uniformity, to facilitate metering or volumetric dispensing, to reduce dust and to improve the appearance of the product⁸.

Types of Granules:

A. Effervescent Granules: Effervescent forms of granules have many advantages over conventional pharmaceutical forms. They substitute liquid forms because active ingredients that are not stable in liquid form are often more stable in effervescent form. Their administration is easy and particularly helpful to children, who are not able to swallow capsules or tablets. They have pleasant taste due to the combination, which helps to mask the bad taste of certain drugs. This could help to avoid the gastric side effects of certain drugs. In certain cases, they can shorten the drug absorption rate in the body with quicker therapeutic effect. They are easy to use and appeal to consumers more than the classical preparations⁸.

B. Rapid Release Granules: Rapid release granules are expected to benefit the class of compound where absorption is highly dependent on the dissolution of the drugs in the gastrointestinal tract. Rapid release granules enhance the dissolution of bioactive compounds to increase the bioavailability of poorly water-soluble compounds⁸.

Tablets: Tablet was the most widely used oral dosage form from the beginning when it came into existence. But some of the people find difficulty in swallowing tablet, so to avoid all these problems associated with a tablet, fast dissolving tablet came in existence.

A. Fast Dissolving Tablet [FDT]: Fast dissolving tablet is gaining popularity in pharmaceutical companies as this is the new drug delivery technique to provide medicine to the patient without obstacle in swallowing. Fast dissolving tablets are designed in such a way that they first disintegrate and then swallowed without the need of water as compared to another traditional dosage form. Its advantage is ease of administration; water consumption is not required, rapid dissolution and absorption of the drug and increased bioavailability⁹.

B. Rapid Disintegrating Tablets - [RDT]: Among the various dosage forms developed to improve the ease of administration, the speedy disintegrating tablet is most widely preferred commercial product. It is advantageous in the administration to the patients who cannot swallow, such as the elderly bed-ridden patients, patients affected by renal failure and patients who refuse to take such as pediatrics, geriatric and psychiatric patients. It is a rapid drug therapy intervention, to achieve increased bio-availability, convenient for administration for travelers and busy people who do not always have access of water, good mouth feeling and risk of choking and suffocation is avoided thus providing improved safety¹⁰.

Capsule: Capsules are one of the solid dosage forms. Drug substances are enclosed in it either in a hard or soft shell or container which are soluble. This container or shell is made up of gelatin and other non-gelatin materials. The advantage of the capsule is that capsules are stable because powders show greater stability than liquid dosage forms as the rate of reaction between drugs in the powder dosage form in atmospheric conditions is slower than the rate of reaction in a liquid medium. Accurate dosage is possible. They are easy to administer, capsules are easy to swallow (suitable shape and slippery when moistened). Unpleasant tastes can be easily masked. The release characteristics of the drugs can be controlled. They can be made light resistant using opaque capsules. The smaller particle size of powdered drugs leads to more rapid absorption from the gastrointestinal tract compared to tablets. This, in turn, leads to reduced local irritation of the gastrointestinal tract which may be caused by the local concentration of a drug as encountered when taking an equivalent tablet. They are well accepted by patients, attractive to patients and convenient to carry¹¹.

Suspension: Suspensions are defined as a class of materials in which one phase; a solid is dispersed in a second phase, generally a liquid. Suspension represents the most common system that is of importance to the pharmaceutical or formulation scientist¹¹. Suspensions find applications in many everyday consumer products such as drugs, cosmetics, foods, etc. The drug is poorly soluble in acceptable drug vehicles or a soluble form of the drug formulated as syrup may not mask the taste of

a drug as well as the suspension dosage form. For poorly soluble drugs the oral suspension is considered the preferred dosage form because of safety. Quite often pediatric or geriatric patients cannot swallow a solid dosage form without undue difficulty. As a result, the solid dosage form is crushed, or for a capsule, the contents emptied in to a suitable vehicle (now the drug is in the suspended state) for easy administration by the patients. This shows a very cautious need for suspension dosage form¹².

Injectable Suspension: Injectable suspensions are heterogeneous systems consisting of a solid phase dispersed in a liquid phase that may be either aqueous or non-aqueous. Its advantage is therapeutic use of a drug that is insoluble in conventional solvents. There is increased resistance to hydrolysis and oxidation as the drug is present in the solid form. Other advantages are possible controlled- release or depot action, elimination of hepatic first-pass effect, etc.¹³

Contemporary Syrup: Syrups are concentrated, the viscous, aqueous solution of sugar or a sugar substitute with or without flavors and medical substances; Syrups possess exceptional taste masking properties for bitter or saline drugs. Flavored syrups have great opportunities as vehicles in extemporaneous compounding and are accepted readily by both children and adults. Flavored syrups are vehicles of choice for many of the drugs that are prescribed by pediatricians. The usual syrup contains certain polyols (glycerin or sorbitol) with sucrose. They may be supplemented to retard sucrose crystallization or to increase the solubility of added ingredients in comparison to simple sucrose solution¹². The conventional method of syrup can be adopted due to various benefits. Mentat DS (sugar-free syrup), Diakof (sugar-free syrup) are the example of some of the syrup¹⁴.

Linctus: Linctus is a liquid dosage form, it is viscous, and the majority of the linctuses are used for the relief of cough. Linctuses coats the throat and helps to lessen the irritation which is the leading cause of cough; this function of linctuses is possible due to its viscous nature. Reformulated sugar-free linctuses are also available for diabetics and to avoid dental caries¹⁵.

Emulsions: Emulsions are colloidal dispersions comprising two immiscible liquids (e.g., oil and water), one of which is dispersed as droplets within the other. Stable emulsions represent an effective formulation approach for the resolution of problems in drug and cosmetic agent delivery. Ease of administration may also play a role in the acceptability of emulsions. For oral or topical use emulsion systems may be easier to administer or apply than other disperse systems such as suspensions. The water wash-ability of topically applied emulsions may be advantageous to the user. Gastrointestinal absorption of poorly absorbed species can often be enhanced by presentation in the form of an emulsion. Emulsification has made intravenous administration of lipid nutrients practical for malnourished or stressed patients¹³.

Microemulsions: Microemulsions are prepared by first dispersing oil in an aqueous surfactant solution and then adding a sufficient amount of a fourth component, to form a transparent system. Microemulsion technology has been extensively and successfully applied in areas as microencapsulation. There is growing recognition of the potential utility of microemulsions for cosmetic and pharmaceutical applications¹³.

An herbal micro-emulsion is prepared with an antitumor diterpenoid compound, ent-11 α -hydroxy-15-oxo-kaur-16-en-19-oic-acid (also known as 5F), which is isolated from the herb *Pteris semipinnata* L. (Banbianqi in Chinese). It has been found that 5F can inhibit the growth of several tumor cell lines, including gastric adenocarcinoma cells, lung adenocarcinoma cells, etc.¹⁶

Self-emulsifying Drug Delivery Systems (SEDDS):

These complex systems are composed of isotropic oil-surfactant mixtures that undergo spontaneous emulsification on mixing with water (e.g., the aqueous contents of the stomach). SEDDS enhance per-oral bioavailability of poorly soluble drugs as well as to minimize gastrointestinal irritation¹³. Silymarin, isolated from *Silybum marianum* Linn. Gaertn (milk thistle), is found effective clinically to treat a variety of liver disorders, including acute and chronic viral hepatitis, toxin- and drug-induced hepatitis and cirrhosis, and alcoholic liver disease. A lipid-based self-micro emulsifying drug delivery

system (SMEDDs) is made with silymarin to improve per-oral bioavailability of silymarin, and it was found that bioavailability of silymarin was enhanced greatly by SMEDDs¹⁷.

Injectable Emulsions: Injectable emulsions have been successfully utilized as a source of calories and essential fatty acids for patients requiring long term parenteral nutrition. Injectable fat emulsions are used to prevent or treat essential fatty acid deficiency (EFAD) in various illnesses as well as in premature or low-birth-weight infants. Injectable emulsions may be used as a means of site-specific delivery such as delivering drugs to phagocytic cells of the reticuloendothelial system for treatment of a variety of parasitic and infectious diseases¹³. Elemene injections were prepared with one ingredient (β -elemene) of Chinese herb *Curcuma wenyujin*, for malignant tumors widely used in clinical practice in China¹⁸. Injection of *Brucea javanica* oil emulsion, one of the Chinese patent drugs has been widely used for lung cancer in China and is known to provide some favorable results, particularly when it combined with conventional treatment¹⁹.

Freeze-dried Products (Lyophilized Products):

By the process of lyophilization we get a product that loves the dry state. In the lyophilization, both the processes freezing and drying occurs within the same equipment. Equipment used for this process is called lyophilizer or freeze dryer. Many parenteral drugs are unstable in solution form, with the help of lyophilization we can remove the solvent and residual moisture from the solute components, which results in a dry powder of that particular drug, having long term stability.

Many biopharmaceuticals are stabilizing their protein contents (albumin) effectively with the help of lyophilization²⁰. Freeze-dried decoction powder of *Ibervillea sonorae* Greene roots (Cucurbitaceae) is prepared and tested on blood glucose levels. However, being hygroscopic it is very effective and convenient for patients²¹. Freeze-dried powder injection of *Panax notoginseng* is used for the treatment of acute and chronic cardiovascular diseases in China²². A variety of freeze-dried botanicals are marketed to the public. Freeze-drying properly preserves the therapeutic qualities of plants and is superior to other preservation

methods. It is a good method to preserve volatile constituents, large-molecular-weight condensed tannin, etc.²³ Freeze-dried amla, and tamarind powder is manufactured for medicinal and kitchen purposes²⁴.

Novel Drug Dosage Form (Oral / Parenteral):

Nanogel: Nanogels are also known as hydrogel nanoparticles. There will be a benefit to the pharmacy from the hydrophilicity, flexibility, versatility, high water absorptivity and biocompatibility of these particles and all the advantages of nanoparticles, mainly long life-span in circulation and the possibility of being actively or passively targeted to the desired biophase, e.g., tumor sites²⁵. Nano-sized drug delivery systems of herbal drugs have a potential future for enhancing the activity and overcoming problems associated with plant medicines. Hence, there is an immense need for NDDS in the traditional medicine system to argument chronic diseases such as asthma, hypertension, cancer, diabetes, and others²⁶. Curcumin encapsulating nanogel is prepared as an effective anticancer formulation²⁷.

Liposomes: Liposomes are spherical vesicles composed of amphiphilic phospholipids and cholesterol. The amphiphilic phospholipid molecules form a closed bilayer sphere in an attempt to shield their hydrophobic groups from the aqueous environment, while still maintaining contact with the aqueous phase via the hydrophilic head group. Drugs with widely varying lipophilicities can be encapsulated in liposomes in the phospholipid bilayer. Liposomes bridge the gap between pharmaceuticals & nanopharmaceuticals. Examples of liposome-based formulations: (a) Doxil (b) Ambisome (c) Daunoxome²⁸. Plant polysaccharides possess a variety of biological activities such as immunomodulation, lipid metabolism regulation, lowering blood sugar, anti-oxidant, anti-aging, & anti-tumor. Liposomes being an important drug delivery system can encapsulate small as well as a big molecule of the drug, so they exhibit great assurance for the application of plant polysaccharides with their sole physical and chemical properties and make extraordinary successes²⁹.

Topical Dosage Forms:

Dentifrices: It is a form of bulk powder generally contains cleansing agent, mild abrasive and

anticarcinogenic property and is applied by the finger. With the growing field of alternative medicine; dentifrices based on plant extracts are available in the market. Dentifrices labeled as herbal/natural typically don't include ingredients such as synthetic sweeteners, artificial colors, preservatives, additives, synthetic flavors, and fragrances³⁰.

Tooth Pastes: Herbal toothpaste containing mostly plant products/plant derivatives are meant for protecting the germs and strengthening the teeth without causing any irritant and harmful effect. Herbal toothpaste is considered to be safe for daily use. Moreover, herbal toothpaste may be free from sodium lauryl sulfate, parabens, fluoride source (NaF), chlorine source and sodium saccharine. Herbal toothpaste have emphasized role in maintaining the hygienic nature as well as in preventing dentalgia³¹.

Hair Dye: Synthetic hair dyes which are available in the market, uses a combination of peroxide and ammonia which alters the structure of hair and damages it and can also cause allergic reactions. It also causes dermatitis around lips, reddening and swelling of scalp and face, etc. People using synthetic dyes are exposed to greater risk of developing urinary bladder cancer and non-Hodgkin's lymphoma. Herbal hair dye can be prepared with conventional processing. Herbal hair dyes are semi-permanent dyes, used traditionally and believed to be safe and non-toxic. Plants have been used traditionally for their hair coloring, growth promoting and anti-aging properties³².

Face Pack: Smooth powder used for the facial application is known as a face pack. Various herbal ingredients are used to prepare the face pack. They are nontoxic and provide a soothing and relaxing effect on the skin. They reduce allergic reactions related to skin. Face pack removes the dirt from skin pores, stimulates blood circulation, rejuvenates the muscles and can help in maintaining the elasticity of the skin.

Face packs increase the fairness, glow, and smoothness of skin by reducing dead cells of the skin. Face packs are one of the oldest and beautiful methods of cleansing skin. Herbal/poly-herbal face packs can be cheaper and safe with no adverse effects for getting fair and clean skin naturally.

Natural face packs contain some vital vitamins that are required for the health and glow of our skin. Face packs can help to reduce acne/pimple, scars and other marks depending on its ingredient herb/drug. Face packs can help to prevent early aging of skin³³.

Hand Wash: Skin being the most exposed part of our body requires protection from skin pathogens. Many of the chemicals antiseptics is now available in the market as alcohol-based sanitizers, chlorhexidine products, *etc.* The adverse effect of these soap solutions can be skin irritation, and it can also cause resistance among various pathogens. Plants are a good source of anti-infective agents, and these plant-based antimicrobials also represent an enormous source for medicines not explored yet. Plants containing flavonoids and polypeptides used in traditional medicine have been found to be active against a wide variety of microorganisms³⁴.

Gel: Pharmaceutical gels are transparent semi-solid systems that are being increasingly used as pharmaceutical topical formulations. They are stable over long periods. They have a good appearance. They are suitable vehicles for applying medicaments to skin and mucous membranes, giving high rates of release of the medicaments and rapid absorption. Gels are usually translucent/transparent and have some uses such as (a) Anaesthetic gels (b) Lubricant gels (c) Coal tar gels for use in the treatment of psoriasis³⁵. Some of the examples of herbal gel manufactured by Himalaya Drug Company is Himcolin (herbal aphrodisiac gel for penis), V-Gel (herbal vaginal gel for vaginitis and cervicitis)¹⁴.

Shampoo: Shampoos are liquid, creamy or gel-like preparations, having a primary function to clean the hair necessitated due to accumulated sebum, dust, scalp debris, *etc.* Herbal shampoos have a natural cleansing agent, such as shikakai and reetha, without harmful effects. Herbal shampoo removes surface grease, dirt and skin debris from the hair shaft without adversely affecting the users. Herbal shampoos have been proved better in performance and safer than the synthetic ones³⁶.

Aerosol: Pharmaceutical aerosols are dosage forms containing therapeutically active ingredients intended for topical administration, introduction

into body cavities, or by inhalation via the respiratory tract. The dosage form is packed in a metal or glass container and sealed with either a metered - or continuous - spray valve. Aerosol dosage form has widespread acceptance for the administration of therapeutically active agents by oral or nasal inhalation. Packaging in a small, compact container is convenient to use and easy to administer. Rapid therapeutic action is attained, and his medication is available for immediate use¹³. 'Herbal Pain Relief Spray' (an aerosol spray) have been developed³⁷.

Sprays: Sprays are topical pharmaceutical aerosols. When sprayed under the tongue they are termed sublingual sprays. Sprays have esthetic properties, ease of application, maintainability of sterility, tamper-proof system, prevention of contamination of the remaining contents and increased stability. An accurate amount of medication can be dispensed each time. These are used as first-aid products containing local anesthetics and antiseptics, germicidal and disinfectant products, protectives, *etc.* Oral sprays are designed to be sprayed either into the mouth or under the tongue. A variety of oral sprays are marketed as mouth fresheners¹³. 'Outer cure' an herbal antimicrobial aerosol spray is primarily developed for the treatment of wound infections without any side effects³⁸.

Ophthalmic Dosage Forms (Drops, Ointments, Gels, and Suspensions): Many of the current ophthalmic preparations are available as sterile, buffered, isotonic solutions because a majority of the ophthalmic drugs are water soluble and drops are easier to administer. When a prolonged therapeutic action is desired, ointments, gelled systems, and suspensions are indicated. Their advantage is that they are non-irritating to the ocular tissues, homogeneous (particles uniformly dispersed), relatively non-greasy, should not cause blurred vision, sterile and adequately preserved, efficacious (provide an adequate amount of drug for the required duration), physically and chemically stable.

Ophthalmic gels offer several advantages such as good tolerability, the formation of a protective film over the cornea and protection from conjunctival adhesions, retention time is increased compared to

solutions and decreased the frequency of administration. Besides these properties, gels are sterile and non-irritating¹³.

Eye Drops: Eye drops are the most common dosage forms of topical drug delivery. Eye drops have little physical interference with vision²⁰. Many Qatoor (drop) preparations in Unani medicine can be converted in conventional eye drop by sterile methods/technology). Ophthacare (herbal eye drop for optimal eye care)¹⁴.

Suppository: These are solid or semisolid dosage forms which are used for rectal, vaginal, and urethral administration. Suppositories are of different shapes and sizes, according to the requirement such as the condition of the patient, site of administration, etc. Traditionally, suppositories are the medicaments which are used for local use and in cases where other alternative routes are not available for the delivery of desired medicaments. The most important advantage of the suppository is its rectal use to deliver the medicaments and to reduce hepatic first-pass elimination and thus to enhance the drug bioavailability.

A wide range of drugs has been incorporated into this dosage form. Treatment of local infection is possible through the vaginal and urethral suppositories¹³. Herbal vaginal suppositories are made from a combination of cocoa butter and coconut or sesame oil³⁹: Renewed DHEA vaginal suppositories, herbal suppositories⁴⁰.

Ointments: According to the United State Pharmacopoeia, ointments are semisolid dosage form proposed for external use to apply the skin or mucous membrane. Besides their medicinal benefits ointments also provide emolliency and other desired benefit²⁰.

Liniments: Liniments are liquid dosage forms meant for external use. They are used to lessen the discomfort, caused by injuries and muscle strains. Liniments have rubefacient nature due to, of its some ingredients, which is beneficial for sportspersons to warm up, before starting a sporting activity, to avoid any muscle damage¹⁵.

Face Powder: Face powder is a solid dosage form, having the ability to praise skin color by imparting

velvet-like finish. Face powders have been and remain one of the fundamentals of cosmetic manufacturing. Face powder enhances the appearance of the skin by masking the glow due to the discharge of sebaceous and sweat glands. Face powder can be made for each type of skin (dry, normal, moderately oily and very oily)⁴¹.

Topical Novel Drug Delivery System:

Hydrogel: Hydrogels are polymeric networks with three-dimensional configurations which are capable of imbibing high amounts of biological fluids or water. Hydrogels have gained considerable attention in recent years as one of the most promising nanoparticulate drug delivery systems. In the current years, several polymeric hydrogel nanoparticulate systems are made and characterized which are based on both synthetic and natural polymers, each with its advantages. Natural polymers are chitosan, alginate, etc. Synthetic polymers are polyvinyl alcohol, polyethylene oxide, etc.

Hydrogels have some common physical properties resembling that of the living tissues. Hydrogels of natural origin may exert immunogenicity or evoke inflammatory responses due to the presence of immunogens/pathogen moieties. They offer various advantageous properties such as being usually non-toxic, biocompatibility and showing some remarkable physicochemical properties that make them suitable for different applications in drug delivery systems. The pharmaceutical hydrogels can be classified as (a) Oral hydrogel systems. (b) Transdermal and implantable hydrogel systems. (c) Topical and transdermal hydrogel systems (d) Hydrogel devices for gastrointestinal drug delivery (e) Hydrogel-based ocular delivery system²⁵.

Market Available Recent Dosage Forms in Contemporary Traditional Medicine Including

Ayurveda: In Ayurvedic medicine, many pharmaceutical companies are now following recent trends in respect of dosage form. If we take the example of Himalaya (Herbal Health Care)¹⁴. they prepare various dosage form as per recent trend for example as, oral dosage form: Tablets [Bresol (cap tab) and many other coated tablets], Capsules- [Evecare, Herbolax, Himcospaz (soft capsule), Liv.52 HB, Oxitard, Picrolax, Talcet, Tentex Royal], Suspension- [Himcocid, Picrolax],

Syrup- [Mentat DS (sugar free syrup), Diakof (sugar free syrup) and many other low sugar load syrups], Topical dosage forms such as: Toothpastes- [HiOra-K, HiOra-Shine], Gel- [Clarina (anti-acne face wash gel), Clearvital (anti wrinkle gel for skin), Himcolin (aphrodisiac gel for penis) / (gel for erectile power of penis), HiOra-GA (gum astringent gel), HiOra-SG (healing stoma gel), PureHands (hand sanitizer gel), Rumalaya (analgesic and anti-inflammatory gel), V-Gel (vaginal gel for vaginitis and cervicitis)] etc.⁴²

Unani Dosage Forms and Their Necessities for Modification and Improvement:

According to the recent trends in traditional medicine dosage form modification is now an essential need. Habb (Pills) should be made of appropriate binder and disintegrants to release the drug within the required period in the GIT. There is an urgent need to convert all the Habb in Qurs (Tablets) form who are not complying with pharmacopeial and regulatory analytical specifications. Qurs (Tablets) should be made of required degree of fineness of powder, advance technique of granulation, drying and compression is needed to obtain desired features of the most popular dosage form, *i.e.* tablet, another Unani dosage form Sharbat is required to prepare with the advance preservation technique to overcome the sugar contents used for preservation, Roghan (Oil) required advance processing and preservation technique to provide longer shelf life and to avoid rancidity.

Marham required advance processing to avoid irritation, systemic toxicity, slow absorption and foul smell, Safoof (Powder) should be manufactured by advance comminution techniques to get uniformity in particle size, thus to avoid indiscriminate bioavailability of active constituents, advance preservation techniques should also be required for longer shelf life, Sunoon (Tooth powder) required advance processing to get fine particles of drugs incorporated, to avoid damage of enamel of the teeth, Zaroor (Dusting powder) form lacks proper packaging leading to shorter shelf life, so advance packaging system is required for Zaroor, Ghaza (Face powder) can be modified to semisolid dosage form and for particle size reduction can be attempted to get uniform and smooth application, Shyaf need improvement in particle size and packaging to avoid irritation and

short shelf life. Arq required advance storage techniques to avoid turbidity and to get longer shelf life, Joshandah (Decoction) required modification in dosage form as granules to get portability, easy to use and longer shelf life or it can also be modified in syrup form, Khesandah (Infusion) required modification in dosage form for longer shelf life and portability by applying drying methods by which heat labile ingredients can be prevented from degradation, Gulqand, Murabba and Sikanjabeen can overcome the excess sugar content by following the modern process of preservation and also better packaging can be done, Majoon, Laboob, Itriphal, Jawarish, Mufarreh, Khameerah also needs modification due to its excess sugar content and can be modified in to sugar free dosage form as an alternative variant in people with calories restrictions they can also be made more palatable in forms such as granules, capsules, tablets, etc. Zimaad should be manufactured by the powder of required particle size, and it also required advance packaging for easy application to the patient, Qairooti needs modification of dosage form to deliver suitably to the patient, Mazoogh can be modified as chewing-gum for ease of the patient and packaging and also leading to longer shelf life.

CONCLUSION: Change is the universal rule of nature and so for the natural products given by nature to us as various herbal remedies. Herbal and traditional pharmaceutical products have great distinction and sophistication fortifying our daily healthful life. Because of enormous engages of herbal products in our daily life the recent trend towards herbal/traditional products is to be adopted. Various Traditional and herbal products have a vast need to overcome the lacunae present in them. In current situation, many traditional and herbal pharmacies are developing new facts and trends to manufacture the required dosage forms. In this study, we find the recent trends and ways to change the state of various traditional and herbal pharmaceutical products to get the ease of administration, portability transportation, and patient's compliance.

By changing the dosage forms as per the insistent requirement of present era we can serve the ailing humanity in a better way with herbal and traditional (Unani and Ayurvedic) products, It can be done by

dosage forms such as, granules, fast dissolving tablets, sugar free variants, etc. and also by following better packaging techniques. It can be concluded that there is an urgent need to adopt these trends in Unani and other traditional Indian medicine and its pharmacy for achieving sustain national and global acceptance.

ACKNOWLEDGEMENT: The authors would like to express their thanks to Prof. M. A. Siddiqui, Director, National Institute of Unani Medicine (NIUM) Bangalore, for his motivation to work.

CONFLICT OF INTEREST: Nil

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How to cite this article:

Zaigham, Hamiduddin, Tauheed A and Ali A: Recent trend in traditional medicine dosage form and present status of Unani and Ayurvedic medicine. Int J Pharm Sci & Res 2019; 10(4): 1640-49. doi: 10.13040/IJPSR.0975-8232.10(4).1640-49.

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