Indications, principles and implications of induction of emesis (Amal-E-Qai): A review

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Abstract
Inducing Qai (emesis) is one of the modes of treatment (part of regimental therapy). Ancient Unani physicians used it extensively as a means of expulsion of excess or morbid humors through oral route. It removes excess morbid matter from the body. In addition to cleansing the stomach qai also removes or mobilizes the morbid material in the distant viscera. It is said to be the best method for excretion of Balghami and Safravi wastes, especially from the liver and stomach. It is also used for making temperament of stomach and neighboring as well as distant viscera equable by refreshing them with new energy after induction of emesis. A new energy is received by all organs for performing their functions more effectively as evacuation of morbid matter is done with therapeutic emesis.

Keywords: Unani, usool-e-ilaj, qai, emesis, istifragh

Introduction
According to Hippocrates (460-377 BC) Qai is the best means of expulsion for preventing and curing the diseases in the lower parts of the body, especially kidneys and lower limbs. It is the best method for expulsion of Balghami wastes from these areas [1-3]. Infact, it is said to be the most helpful means of istifragh after purgation. In addition, qai carried out in moderation improves vision, digestion and appetite, also relieves the heaviness in head. It helps in reducing edema and inflammation and helps in the treatment of some of the types of epilepsy, jaundice, tremors, paralysis, gout, melancholia, leprosy and most of the chronic diseases.

The proper use of qai helps in natural weight gain when necessary. As a preventive measure, qai is said to be most beneficial for thin built people having Safravi Mizaj. However, according to Razi, such people should be given Ratab diet before qai so that dryness is not caused [1-2].

The ideal candidate for qai is one having a broad thorax and strong abdominal muscles and the best seasons are summer and spring. Because in these seasons, the humors are less viscous and may easily be excreted via emesis. Also, the abdominal and thoracic musculature is relaxed and strong movements are possible with little effort [1-2, 3]. In addition, there is an increased production of Safra in summer season which also enhances the effect of emetics. For the above mentioned reasons, qai is best induced in the afternoon of summer season. Qai is also an effective means of expelling excessive Balgham, especially if accumulated inside the stomach. In such cases, the Balgham may be adhered to the stomach wall and into the mucosal folds; and may not be completely removed by purgation. Hence, qai is a more effective and easier means of complete expulsion [1-2, 3, 4, 5].

Pathophysiology and phases of Emesis
Muqiyat (emetics) induce qai either by stimulating the stomach and causing reverse peristalsis, or by stimulation of vomiting centre [6, 7]. Hammam, exercises and stimulation of the throat with a feather, luke warm salt solution of water and other means are there to be used as supportive measures to induce qai [8, 9, 10]. In both cases, there are definite hormonal and immunological changes in the body. Jurjani has provided a simple explanation of the mechanism of action of qai.

He states that the passage of bile through the intestines acts as a natural cleanser for the intestines due to its Haar (hot) temperament as it removes the viscid and adherent Balghami (phlegmatic) wastes [3-6, 7]. The physical stress on the body during the act of qai mobilizes the humors in distant viscera also.
Vomiting is believed to be controlled by two distinct brain centers—the vomiting center and the chemoreceptor trigger zone—both located in the medulla oblongata. The vomiting center initiates and controls the act of emesis, which involves a series of contractions of the smooth muscles lining the digestive tract. These contractions begin at the small intestine and move successively through the stomach and the esophagus until the stomach contents are forced out the mouth [3, 10, 4, 6, 7, 15]. The vomiting center responds directly to stimuli from various parts of the body that may be stressed or diseased. The chemoreceptor trigger zone, by contrast, is stimulated by many toxins and drugs. Activation of this brain region stimulates the vomiting center, which initiates emesis in an effort to rid the body of the toxin. In severe cases vomiting may result in dehydration, malnutrition, or rupturing of the esophageal wall. Treatment is directed toward the cause of the vomiting. It is important to drink plenty of clear fluids so that further dehydration does not occur [6, 7, 8, 9, 15].

Three phases in vomiting: There are certain events that take place in the process of vomiting depending upon the feeling of vomiting to expulsion of the content to be expelled out as vomitus. They are as follows:

1. Nausea: It is an unpleasant sensation of wanting to vomit, and is often associated with cold sweat, pallor, salivation, loss of gastric tone, duodenal contraction, and the reflux of intestinal contents into the stomach. Nausea generally precedes vomiting, but can occur by itself. The system that brings about the loss of gastric tone, of gastric relaxation, is the efferent part of the long loop intestinal reflex that relaxes the gut during food intake.

2. Retching: is a strong involuntary effort to vomit, and usually follows nausea. During retching, the abdominal muscles, chest wall and diaphragm all contract without any expulsion of gastric contents.

3. Vomiting: is the forceful expulsion of the contents of the gastrointestinal system out through the mouth. From an evolutionary perspective, it is thought to have evolved as a defense mechanism of the body, serving a protective function to rid the body of noxious substances that have been ingested, rather than allowing them to be retained and absorbed by the intestine [1, 2, 4, 5, 6, 7, 15].

Contrary to popular belief, the stomach itself does not actively expel its contents during vomiting. The stomach, oesophagus, and their relevant sphincters are all in fact
relaxed during vomiting. Most of the force that expels the contents arises from the contraction of the diaphragm, which is the major respiratory muscle, and the abdominal muscles, which are the muscles involved in active expiration [6, 7, 13, 15].

Benefits of Qai in Health and Disease: The importance of qai in maintenance of health can be deduced from a quote of Hippocrates wherein he stated: ‘I guarantee that a person who follows this therapy (emesis) properly will have his health preserved’ Qai is considered to be an effective procedure for health protection and promotion. In a healthy person, qai is recommended as a preventive measure as it removes the wastes accumulated in the stomach after digestion. Specifically, the foods which are not easily digestible (ghaleez ghiza) tend to leave more wastes behind in the stomach, and their judicious removal is imperative for maintaining a normal digestion, which is in turn related to all of the body processes. A similar flow of bile into the stomach may be induced by qai which helps in cleansing its internal lining. Such cleansing is repeatedly required as the waste substances tend to accumulate as a result of physiological processes [1, 2, 3, 4, 5, 11, 12].

Therapeutic Emesis: Therapeutic emesis is regulated by the vomiting centre in 4th ventricle of medulla oblongata. The action of emetics may be:
1. Local: in which drugs cause the stimulation of gastric mucosa and cause reverse peristalsis.
2. Central: mediated by central nervous system [1, 2, 4, 10, 11, 12].

There have been several attempts to decipher the mechanism of action of qai on human physiology. Based on experiments and observations, some theories have been forwarded. It is hypothesized that due to the positive stress produced on the body, qai stimulates the production of glucocorticoids. Which in turn increase the release of ACTH which has an anti-inflammatory action, and is immune suppressant to some degree, therefore beneficial in autoimmune disorders [6, 7, 13, 14, 15]. In addition, the release of catecholamines increases the heart rate and causes dilatation of blood vessels, which assists the anti-inflammatory process. Mild increase in blood pressure (systolic and diastolic), heart rate, temperature and respiration is observed during the procedure which is attributed to sympathetic action and resolves spontaneously. However, this necessitates caution while carrying out qai in hypertensive patients. There is also a mild cleansing action on the intestinal flora; however, the bacteroids and E. coli remain within normal limits. In addition, it is observed that ESR decreases and TLC increases significantly shortly after qai, indicating an immune response. This decrease in ESR is found to persist for up to days after the therapy. Qai also leads to a decrease in LDL, increase in HDL and serum triglycerides. It also leads to a drop in serum sodium and potassium levels, which however, remain within the normal range. Significant decrease is also seen in blood urea, and some decrease in serum creatinine and total proteins. There is also a slight decrease in plasma histamine and plasma adrenaline levels, and an increase in plasma dopamine and nor-adrenaline. An increase in IgE is also noticed shortly after qai which persists for at least 15 days [6, 7, 13, 14, 15].

Principles to be followed before, during and after therapeutic emesis: Normal healthy persons should undergo routinely qai procedure once or twice a month. According to Unani physicians, in both these cases, qai should preferably be done on two simultaneous days so that if some matter is left behind on the first day, it may be expelled on the next day. This also helps to excrete those humors which may be drawn into the stomach later due to increased movements during qai. However, it is not advisable to fix a specific day of the month for the procedure. Rather, the emesis should be done variably as required. If a person is not accustomed to qai or in cases where qai needs to be done despite some contraindication, the patient should be given mild emetics along with soft and sweet foods which have a high fat content. Such patients should not be allowed to exercise, and vomiting should be induced gradually. Before the procedure, such patient should be given nutritious diet, so that if vomiting does not occur, then further risk may be minimized. Emesis is more readily induced on a full stomach, so it is advisable to have a full stomach before taking emetics. However, if the patient is obese and has a predominance of Balghami mizaj, qai should be done after exercising and on a full stomach; such patients should also not be given hammam before qai. A patient who is thin and weak, and predominantly having Safravi mizaj, should undergo qai after having a normal diet.
and fluids, and should also take a bath with warm water before qai. Diet given should be such that it aids the action of muqiyat (emetics), for instance fresh fish, jaw (Hordeum vulgare), sikanjabeen (Oxymel), etc. After completing qai, apple and pomegranate juice are recommended [1, 2, 3, 4, 5, 8, 9, 10, 11, 12].

However, qai should be avoided in pregnant, asthenic patients, those who have weak perineum, patients having no plethora in their body, and certain other conditions. Nevertheless, over-enthusiastic procedure should be discouraged as it may lead to general weakness, damages the liver, lungs and eyes, causes weakening of the stomach, increases the flow of morbid humors towards the stomach, harmful for the teeth and may cause haemoptysis due to increased intra-thoracic pressure [1, 2, 3, 4, 5, 8, 9, 10, 11, 12].

Therapeutic Applications: Such is the importance of therapeutic emesis in Unani Medicine that it is prescribed at the commencement of treatment in most of the disorders. More importantly, specific emetics are prescribed for individual disorders, which indicate that the drugs exert their therapeutic actions also along with the emetic effect. Muqiyat (emetics) are classified into three grades depending on their potency. Warm water, Ma-ush-shaeeer (Barley water), sikanjabeen (oxymel) and decoction of shib (Anethum sowa) are weak emetics. Sikanjabeen (oxymel) is a soothing Unani medicine prepared by boiling two parts of honey and one part of vinegar. It acts as emetic in hot water and as anti-emetlc in cold water. Bekh-e-kharapa (Root of Cucumis melo), bekhe khayar (root of Cucumis sativus), piyaz nargis (Narcissus tazetta), juice of radish are moderate emetics; while kundush (Saponaria officinalis), tukhm-e-turb (seeds of Raphanus sativa) are strong emetics. If a strong emetic has to be used, then if any contraindication is not present, three rules should be followed: the emetic should be given on empty stomach, after two hours of sunrise and after the patient has relieved himself from natural call so that the intestines are free of excrement. Studies on healthy volunteers have shown that qai is a well-tolerated bio-cleansing procedure which increases appetite, regulates bowel movements, improves sleep pattern and cleanses the gastro-intestinal tract [11, 2, 3, 4, 5, 8, 9, 10, 11, 12].

Conclusion

Induction of Tanqiya-e-mawad (evacuation) is the main principle for any such condition which is due to accumulation of morbid matter. Emesis is a natural process of evacuation/elimination as well as defensive action of the body to clean out body from morbid matters. Tabiyat uses this mode of evacuation at times where morbid matter accumulates both in quantity and in quality. At initial stage, both the conditions are corrected with the help of emesis. But in severe conditions higher treatment or aids are opted like use of medication, gastric lavage, enema etc. As a therapeutic measure qai is very much effective if done properly by following its principles at all the stages of it (i.e before, during and after). It is recommended in various ailments and patients or healthy person can be benefitted by adopting it when required. For example cases of epilepsy, indigestion, gastralgia, gout, arthritis, rheumatic fever and various other disorders where therapeutic emesis is proven useful practically.

References

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