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Review of Stomach-related Eye Diseases from Traditional Medicine Perspective

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ABSTRACT

Ancient physicians deemed the human body as a set of various interrelated organs. They believed that in dealing with patients a particular afflicted organ should not be considered in isolation and treated exclusively since the illness might occasionally originate from another organ’s dysfunction, which should be cured beforehand. Stomach is one of the organs that the physicians were very concerned about in the past. Since the first stage of digestion occurs in the stomach, gastric dysfunction will impair digestion and various organs of the body will not be well nourished and get sick afterwards. Among the organs affected by the stomach function is the eye the diseases of which may occur as nyctalopia, poor eyesight, visual hallucinations, and periorbital puffiness secondary to gastric dysfunction. This is a descriptive review of gastrointestinal procedures which can improve vision and treat some eye diseases.

Key words: Stomach; Nyctalopia; poor eyesight; periorbital puffiness

INTRODUCTION

A review of ancient medical books and study of the works of eminent scientists such as Avicenna (Ibn Sīnā), Rhazes (Abū Bakr Mohammad ibn Zakariyyāʾ al-Rāzī), Aghili Khorasani, etc. imply that ancient physicians would consider human body to be a set of various organs, all communicating with each other. According to them, some sort of illness in an organ can affect the function of others, the extent of which depends on the role of the organ in the body. Stomach is, for instance, one of the organs whose disease might influence the whole body (Chaghmini Karazmi, 2010). As digestion initially occurs in the stomach, its sickness or impaired function will disrupt the first stage of digestion, which in turn causes loss of proper digestion of food to turn into an appropriate nutrient for organs. An imperfect supply of the appropriate nutrient to organs will give rise to their impaired function (Chaghmini Karazmi, 2010). Eye is one of the organs that might be affected by gastric diseases. Imperfect function of the stomach can bring forth some eye disorders. In such cases the gastric function needs primarily to be adjusted and then improved; no perfect result will be achieved unless the stomach is treated first (Chashti, 2008). That is why among the instructions to protect the health of eyes, in all ancient medical books, there exist some parts dealing with diet modification and digestive system improvement. Nyctalopia, poor eyesight, visual hallucinations, and periorbital puffiness are the most common diseases which occur secondary to stomach dysfunction.

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METHOD

This is a descriptive review of stomach-related eye diseases from traditional medicine perspective. In the first place, the reliable literature of different centuries on traditional medicine, including the Canon of Medicine (by Avicenna), Exir-e-Azam [The Grand Elixir], Šeb-e-Akbari [Akbari’s Medicine] (by Mohammad Akbar Arzani), Al-Hawi (The Virtuous Life) (by Rhazes), al-Iqrazi-Tebbiye (by Seyyed Esmaeil Jurjani), Ma al-Fariq (or al-Furuq or Kalamun fi al-Furuq bain al-Amrady) [Diagnostics Differentials] (by Rhazes), as well as a few other books were reviewed and the pertinent data were collected. In the second place, the collected data were analyzed and categorized as follows. At the end, the most recent scientific findings of new articles were added.

General Instructions to improve eyesight from traditional medicine perspective:

- Eat in moderation, neither too little nor too much (Chashti, 2008).

- Refrain from severe movement, exercise, and especially intercourse after meals (Chashti, 2008).

- Avoid sleeping shortly after meals (Chashti, 2008).

- Eschew certain fruits and vegetables such as pumpkin (Cucurbita pepo DC.), cucumbers, peaches (Prunus persica L.), garlic and onions (Chashti, 2008).

- Foods such as broad beans, milk, kidney beans (Phaseolus vulgaris L.), cabbage (Brassica oleracea L.), lentils (Lens culinaris Medic.), eggplant (Solanum melongena L.), lettuce (Lactuca sativa L.), vinegar, beef, dates, dill (Anethum graveolens L.) and leek (Allium porrum L.) are harmful to the eyes (Vahedi, 2004).

- Foods that taste too spicy, sour, salty or astringent are detrimental to the eyes. Excessive consumption of sweets can also cause damage to the eyes (Chashti, 2008).

- Constipation is one of the problematic issues that can be very pernicious to the eyes. According to Rhazes, in all kinds of eye diseases, whatever the cause, the stomach function should be improved and constipation has to be relieved, as the first treatment step (Vahedi, 2004).

- Raw olives with little salt, dried coriander fruit (Coriandrum sativum L.) mixed with sugar and hawthorn (Crataegus monogyna) are useful for the eyes if eaten after the meal (Chashti, 2008).

- Excessive consumption of turnips improves eyesight (Chashti, 2008).

- Spices like cinnamon (Cinnamomum zeylanicum Bl.), cloves (Diantuthcaryophilus L.), black pepper (Piper nigrum L.), saffron (Crocus sativus L.), star anise (Illicium verum Mill.) and varieties of nuts are good for eye health (Chashti, 2008).

EYE DISEASES

From ancient physicians’ point of view, a number of eye and eyelid diseases can occur with gastric involvement, some of which are as follows:

1. **Nyctalopia (night blindness)**: refers to abnormally poor eyesight in darkness, to the extent that the sufferer cannot see the stars at night. Eyesight during daytime is normal, but when the sun is close to setting acute vision loss begins. One of the causes of night blindness is likely to be poor digestion and gastric dysfunction (Arzani, 2008). If the signs diminish in hunger but aggravate when the stomach is full, the gastric dysfunction is known to be the cause. If the disorder takes place secondary to digestive problems, it can be relieved by eating less and taking laxatives (Chashti, 2008). Eating spicy foods containing asafoetida (Ferula assafoetida L.), wild mint (Mentha longifolia L.), kotschyan thyme (Thymus kotschyanus Boiss & Hohen) and black mustard (Brassica nigra L.) is useful for night blindness. Patients suffering from nyctalopia should desist from eating slow-digesting and fume-inducing foods like lentils, kidney beans, broad beans and cabbage as well as from consuming too much common purslane. People suffering from nyctalopia have to avoid eating dinner, although excessive consumption of chicken’s head can cause night blindness in everybody (Chashti, 2008). Vapor inhalation of boiling water containing star anise, chamomile, rue and origany (Origanum vulgare L.) can help alleviate the disorder, too (Chashti, 2008).

2. **Visual hallucination**: refers to illusory visual perception of motley-colored shapes in the air (Arzani, 2008). One of the reasons behind the manifestation of the problem is fumes ascending from the stomach to the eyes. If caused by stomach fumes, it is further exacerbated by eating flatulent foods, during stomach fullness and digestion, as well as at the time of movement. The condition is not always steady, but it fluctuates now and then in terms of changes in the cause. The hallucination does not come about exclusively in a certain eye, but it takes place in both eyes and can be accompanied by nausea. More often the patients have a history of gastric disease associated with some degree of impaired digestion. Severity of visual hallucination is affected by consuming fast-burning foods and modification of digestion. In such patients the intensity of the disorder abates frequently after vomiting (Rhazes, 2009).

3. **Poor eyesight**: refers to any disorder that happens to the visual function. It consists of various visual impairments in which, for example, an object is not observed as is, or it cannot be seen from a distance that a
healthy eye can perceive, or the eye discerns an object mistakenly, i.e. the eye conceives the large as small, the black as white, the tall as short, the straight as crooked, and/or vice versa (Chashti, 2008). In a particular kind of poor eyesight there exists no disorder in eye's function, but the impairment is due to an underlying disease in the stomach, in which the stomach fumes ascend toward the eyes and spoil their function. The condition is not invariably; it is deteriorated when the stomach is full but disappears in hunger (Arzani, 2008).

In another kind the main cause of poor sight is opacity of aqueous fluid in the anterior chamber of the eye, resulting from, for instance, failure to strictly adhere to theore principles of healthy eating and drinking. When looking down, the patients see a black membrane in front of their eyes that fades away as they begin to look up (Arzani, 2008). To cope with poor vision resulting from an underlying stomach disease, the sufferers have to avoid sleeping when their stomach is full, and need to wait until the food is half-digested. Constipation-inducing foods and persistent hunger are extremely harmful to such patients (Chashti, 2008). Rhazes believed that eating salty foods give rise to damage to eyesight (Rhazes, 1977). All flatulent foods including milk, broad beans, onions and garlic are harmful to the eyes. Foods like broccoli, lentils and eggplant cause eye opacities. Vinegar is harmful to eyes (Chashti, 2008). Foods that are salty, spicy, sour, astringent, too cold, or too hot as well as whatever that hurts the cardio and harms the brain, particularly vinegar, sour apple, dill, dates, beef and salt-cured meat, ripe olives are injurious to the eyes. Further, too much sleep, lengthy awakening and excessive bathing can cause damage to the eyes (Chashti, 2008). Eating cinnamon, black pepper, saffron, star anise with little salt, almonds with rock candy and persistent consumption of myrobalan fruit (Terminalia chebula Retz) and emblic (Phyllanthus emblica L.) help protect eye health (Chashti, 2008). Continuous use of boiled turnips is useful for vision and eating raw chicory with rock candy improves it. Fennel water, turmeric brew, and sweet basil water are used to strengthen the eyes. However, eating khash (dish), haleem, dates, fenugreek (Trigonella foenum-graecum), and onions damage the eyesight (Chashti, 2008).

4. **Periorbital puffiness**: A patient presented with eyelid puffiness should firstly be examined and evaluated in terms of gastric and liver functions, which are both considered the most common factors causing eyelid puffiness (Chashti, 2008). In such patients the stomach and liver functions should be modified and strengthened using barberry and oxymel (Chashti, 2008). According to Rhazes, to treat this kind of puffiness a cloth is soaked in rosewater and placed on the affected area. A cloth soaked in warm water is put on the location afterwards. Further, vapor inhalation of boiling chamomile, origany, celery, star anise and cumin is helpful.

**DISCUSSION AND CONCLUSION**

As mentioned above, ancient physicians particularly attended to people's diet and lifestyle to maintain and improve their eye health, since they believed that gastric disease can impact the whole body, especially the eyes. New medical literature and recent articles, of course, have paid particular attention to eye health maintenance. Below are mentioned some: Compounds such as omega-3, vitamin C, vitamin E, lutein and zeaxanthin have a positive impact on vision, while smoking has a negative effect. High intake of flavonoids might prevent the onset of age-related eye diseases (Milbury, 2012). Use of multivitamin and/or mineral is reported to prevent the development of lens opacity and obstruct its progress (Maraini et al, 2008). Age-related macular degeneration (AMD) is the leading disease that causes irreversible vision loss in the United States and Europe. Its pathophysiology has remained unknown and seems to be multi-factorial (Querques and Souied, 2014).

Lutein and zeaxanthin are the two pivotal compounds in eye health. They are found in foods that are rich in carotenoids, such as cantaloupe, pasta, corn, carrots, red peppers, salmon and eggs; they augment eyesight and reduce risk for AMD and cataract (Abdel-Aal et al, 2013). Lutein and zeaxanthin contribute to development of macular pigmentation of the eye (Johnson, 2012). Which in turn will boost the vision and can prevent the progression of AMD in the early stages (Ma et al, 2012). Taking vitamins C and E, beta carotene, zinc and copper for 5 years has been reported to lower the chances of developing AMD by 25% (Chew, 2013). In a study conducted in 2012, the risk of progression to age-related macular degeneration has been proved to be further lessened by a lower-glycemic index diet than foods with a higher-glycemic index. The reason is the accumulation of toxic substances, derived from sugar, in retina (Weiketal, 2012).

High folate intake reduces the risk of exfoliative glaucoma (Kang et al, 2014). It has also been proved that taking vitamins A and E, and serum levels thereof have no impact on the prevalence of glaucoma, but vitamin C supplements diminish the risk of glaucoma (Wang et al, 2013). Pan and Lin, in an article, reported that obesity enhances the risk of age-related cataract (Pan and Lin, 2014). Being a common cause of blindness in children, Xerophthalmias is closely related with severe malnutrition (Moore et al, 2013). People with Crohn's disease who have a portion of their intestine removed are prone to malnutrition, particularly vitamin A deficiency, which can lead to night blindness (Rocha Lima et al, 2014). Commonly observed in celiac disease and gluten sensitivity, there exist a series of neuropsychological disorders, including autism, schizophrenia, visual and auditory hallucinations (Genuiset al, 2014), in which the
risk of nyctalopia has been reported up to 6% (Philip et al, 2012). Modern medicine, as observed above, also pays special attention to diet so as to maintain and improve eye health. Review of ancient medical literature provides further instructions on how to improve eyesight, which helps us take effective steps to maintain eye health and prevent its diseases.

REFERENCES

Starkey E. A pilot study to gauge nutritional behavior regarding eye health in an urban community health center population. Optometry. 2011;92(9):510-8.


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