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Concept of Hysteria in Greeco- Arab medicine: a Review

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ABSTRACT

Hysteria is undoubtedly the first mental disorder attributable to women, accurately described in the second millennium BC, and until Freud considered an exclusively female disease. Over 4000 years of history, this disease was considered from two perspectives: scientific and demonological. Hysteria is regarded as a symptom of emotional disturbance and mental disorder that is common among adolescent girls. It often occurs in schools during classes. Its bizarre symptoms include sudden shouting, struggling, crying for no reason, talking unintelligibly and body paralysis. Previous research on hysteria by psychologists, psychiatrists and physicians from Unani system of medicines identified many factors that cause hysteria. Hysteria may be related to cultural factors or to individual values and beliefs. The hysterical reaction is one way for these patients to release emotional stress. Teenagers who suffer from uncontrolled stress may express themselves through hysteria.

Keywords: History, Hysteria, Unani medicine, Ikhtenaqur-Rehm.

1. Introduction

We intend to historically identify the two dominant approaches towards the mental disorders, the “magic demonological” and “scientific” view in relation to women not only is a woman vulnerable to mental disorders, she is weak and easily influenced (by the “supernatural” or by “organic degeneration”) and she is somehow “guilty” (of sinning or not procreating) thus mental disorder especially in women so often misunderstood and misinterpreted, generate scientific and or moral bias defined as a pseudoscientific prejudice. Knowledge of human behavior or mental disorders can be traced back to Ancient Egypt, Greek and Roman sources. As it is evident from mythology and the Homeric and other epics, mental illness was often considered directly due to involvement of gods in early Greece ^[1, 2]. It was the Hippocrates (460-377BC) who firstly postulated the concept of disease is due to the imbalance of humor and hence emphasized on natural knowledge and hence freed Medicine from the realm of superstition and magic, and gave it the status of science ^[1, 4]. He classified mental disorders into three categories: a mania, melancholia and hysteria ^[5]. The other well-known Arabic Physician, Rabban Tabri has classified mental disorders into 13 types in his book “Firdausul Hikmah” such as sa’ra, waswasah, hizyan, fasadekhayal, fasade aq’l, nisyah, bedaari, kasrate neend, dawi, duwar etc ^[6]. Same number of mental diseases has been mentioned by Razi in his book “KitabulFakhir”^[7]. Hysteria is similar to epilepsy & unconscious. Its origin is uterus but it involves heart & brain. It is mentioned in Unani classical literature with their clinical picture and detailed treatment.

1.1 Nomenclature:

- Since the patient feels as if an air ball arises from her abdomen or pelvis & obstruct the pharynx. Therefore, it is called “bao-gola” in Hindi.
- Since the patient feels as if she has been throttled. In the past, the disease was associated with uterine disorders; therefore it has been named as “ikhtanak-ur-rehem”.
- Hysteria is a Unani word derived from Hystewria which means uterus.

2. Aetiopathogenesis:

In Unani Medicine, the pathogenesis of general diseases has been attributed to three factors viz. mizaj (temperament) tarkeeb (structure) and ittesal (continuity of tissues). Abnormalities of these factors are considered as: sue Mizaj (altered temperament), sue Tarkeeb (altered structure) and tafarruq Ittesal (discontinuity in tissues) respectively ^[8, 9].

Mizaj is a specific and distinct state of an individual reflecting neuro-endocrine, genato-metabolic and anxiety are described under various mental disorders somato-environmental equilibrium at the optimum functional level of adjustment [10]. The harmony of specific mizaj results in proper and healthy functioning of the body and derangement in this distinct state consequently becomes the cause of ill health [11]. The derangement of mizaj, results from the shift in the equilibrium of four qualities (kaifiyate arba) i.e. hararat (hotness), baroodat (coldness), ratoobat (moistness) and yaboosat (dryness) is considered as the mizaj sada and if this imbalance is at the level of Akhlat (body fluids/humors) it will be considered as the mizaj maddi.^[12] Unani medicine, as is well known, based on the Hippocratic humoral theory. This theory supposes the presence of four humors in the body viz: blood, phlegm, yellow bile and black bile. The mizaj of individuals are expressed by word damawi (sanguine), balghami (phlegmatic), safrawi (choleric) and saudawi (melancholic) according to the dominance of the humour. Every person is supposed to have a unique humoral constitution which represents his healthy state and any change in this state causes illness of the said person. The severity of the disease depends directly upon the change in equilibrium from mizaj [13]. The first description referring to the ancient Egyptians dates to 1900 BC (Kahun Papyrus) and identifies the cause of hysterical disorders in spontaneous uterus movement within the female body [14, 15].

In the Eber Papyrus (1600BC) the oldest medical document containing references to depressive syndrome, traditional symptoms of hysteria were described as tonic-clonic seizures and sense of suffocation and imminent death [14, 15]. According to Greek mythology, the experience of hysteria was at the base of the birth of psychiatry. Melampus cured these women with hellebore and then urged them to join carnally with young and strong men. They were healed and recovered their wits. Melampus spoke of the women's madness as derived from their uterus being poisoned by venomous humors, due to a lack of orgasms and "uterine melancholy" [14, 15]. Plato, in *Timaeus*, argues that the uterus is sad and unfortunate when it does not join with the male and does not give rise to a new birth, and Aristotle and Hippocrates were of the same opinion [14, 15]. Hippocrates (5th century BC) is the first to use the term *hysteria*. Indeed he also believes that the cause of this disease lies in the movement of the uterus. The Greek physician provides a good description of hysteria, which is clearly distinguished from epilepsy. He emphasizes the difference between the compulsive movements of epilepsy, caused by a disorder of the brain, and those of hysteria due to the abnormal movements of the uterus in the body. Then, he resumes the idea of a restless and migratory uterus and identifies the cause of the indisposition as poisonous stagnant humors which, due to an inadequate sexual life, have never been expelled. He asserts that a woman's body is physiologically cold and wet and hence prone to putrefaction of the humors (as opposed to the dry and warm male body). For this reason, the uterus is prone to get sick, especially if it is deprived of the benefits arising from sex and procreation, which, widening a woman's canals, promote the cleansing of the body. And he goes further; especially in virgins, widows, single, or sterile women, this "bad" uterus – since it is not satisfied - not only produces toxic fumes but also takes to wandering around the body, causing various kinds of disorders such as anxiety, sense of suffocation, tremors, sometimes even convulsions and paralysis. For this reason, he suggests that even

widows and unmarried women should get married and live a satisfactory sexual life within the bounds of marriage [14, 15]. Shaikhur Rayees Abu Ali Hussain bin Abdullah bin Sina (980-1037 A.D) described that Hysteria is similar to epilepsy and syncope. Its origin is uterus but it involves heart & brain. It occurs due to amenorrhea and retention of semen. It occurs in prepubertal girls, nulligravida and lactating mother. Due to retention of semen the temperament of women diverted towards the baroodat (coldness). Due to baroodat (coldness) the viscosity of semen and menstrual blood increased hence it remains in the uterus. When it remains in the uterus for long duration it becomes toxic (samme maadha) which leads to Tashanuj and pressure in vessels. Due to retention the uterus gets diverted to one side. Sometime toxic vapors reach up to brain and heart which results in unconscious and syncope [16].

Erudite of his time Abu Bakar bin Mohammed Zakaria Razi (865-925 A.D) stated that Once it came to my observation to see women who have aborted and have unconscious and the pulse was Zaheef and Sageer and some time the pulse was not identified. Another incidence of my life to see women which was conscious and not in synoptic condition but the condition of breathlessness was present. Another incident was to see women who have an epileptic condition. All these conditions suggest that hysteria has many types. Sometime the condition will occur that it is difficult to identify that woman is alive or dead.

Razi stated that hysteria occurs due to amenorrhea and retention of semen. Most cases it occurs due to retention of semen because excessive semen containing women when retention of semen occurs such clinical picture occurs which are described above. It occurs in virgin girls because their sexual desire is not fulfilled. If froth comes out after an attack it is a good sign [17]. According to Shareef shafuddin ismeel Jurjani (Died in 1140 A.D) & Mohammed Kabeerud din (1894-1976 A.D) that Hysteria is similar to epilepsy and Syncope. Its origin is uterus but it involves heart & brain. Its causes are sometimes amenorrhea & accumulation of blood or its causes are increase in secretions or its retention. It generally happens in unmarried females or in those patients, who are habitual of coitus. So when menses or secretions are blocked, it gets diverted towards coldness which is very usual & sometimes its conversion occurs towards the putrefaction & hotness (hararat). So the toxicity either cold (Barid) or hot (Haar) which appears in uterus and also affects heart & brain [18, 19].

There are two forms in which this toxic substance (Sammi madha) can affect brain & heart.

1. First of all, uterus is affected; it gets displaced in one side, due to displacement heart & brain will be effected.
2. When toxic substance (Sammi maddah) becomes faasid in uterus, then toxic vapours reach heart & brain & cause disease.

If its toxic substance (Sammi maddah) goes towards brain, it causes epilepsy, spasm or paralysis. Hakim Mohammad Hassan Qarshi stated that. The disease is more common in young, sophisticated females especially when the nervous system is congenitally deformed or if they show inherited susceptibility to this disease. Along with this, often complaints of amenorrhea, puerperium, leucorrhoea & displacement of uterus are common. According to pioneers of Unani medicine, occasionally this disease also arises as a result of retention & putrefaction of seminal fluid

along with severe constipation, impaired digestion, flatulence, anger, stress, anxiety, fears & sorrows, etc. & some psychological factors that are exaggerated. Sudden shocks are the predisposing factors. Prolonged insomnia, excessive fatigue is also the underlying causes [20].

Maseehul Mulk Hafiz Hakeem Ajmal Khan (1894-1976 A.D) mentioned that the origin of hysteria is uterus named it as Ikhtinaqur-Rehm .He stated that it occur in rich females of delicate temperament and in females living in cities between the age of 12-40 years .Amenorrhea and dysmenorrhea can also cause this disease. He further stated that chronic constipation, nafakh-e-shikam, distress, sorrow, anxiety, fear and anger can all causes the disease [21].

2.1 Clinical picture of Hysteria:-

Aulus Cornelius Celsus (1st century BC) gives a good and accurate clinical description of hysterical symptoms. In De re medica Celsus, he wrote "In females, a violent disease also arises in the womb; and, next to the stomach, this part is most sympathetically affected or most sympathetically affects the rest of the system. Sometimes also, it so completely destroys the senses that on occasions the patient falls, as if in epilepsy .Claudius Galen (2nd century AD) are comparable to those of Hippocrates. Furthermore Galen says of hysteria "Passio hysterica unum nomen est, varia tamen et innumera accidentia sub se comprehendit" (hysterical passion is the name, but various and several are its symptoms), highlighting the variety of hysterical events. In his work In Hippocratis librum de humoribus, Galen criticizes Hippocrates: "Ancient physicians and philosophers have called this disease hysteria from the name of the uterus, that organ given by nature to women so that they might conceive. I have examined many hysterical women, some stupor us, others with anxiety attacks the disease manifests itself with different symptoms, but always refers to the uterus [22]. Soranus (1st half of 2nd century AD) who wrote a treatise on women's diseases women disorders arise from the toils of procreation, their recovery is encouraged by sexual abstinence and perpetual virginity is women' ideal condition. Fumigations, cataplasms and compressions are ineffectual, the hysterical body should be treated with care: hot baths, massages, exercise are the best prevention of such women' diseases [15, 22]. Shareef shafuddin ismeel Jurjani & Mohammed Kabeerud din mentioned the following clinical picture. It starts with paroxysms of morbid fascination (imagination), darkness before eyes, tinnitus, pain below umbilicus, loss of appetite, difficulty in respiration, palpitation, fatigue, weakness in legs & change in color occurs.

- ✓ Eyes become watery & when time comes closer then suffocation, palpitation starts.
- ✓ Uncontrolled movements occur in mouth, lips & face, teeth starts making noise, voice gets choked.
- ✓ Breathing becomes feeble. Patient will feel as if something is going up from her pubis symphysis. She does not talk but understands whatever is said to her, then she becomes unconscious & there is loss of sensation [18, 19].

Abu Bakar bin Mohammed Zakaria Razi described the following clinical picture of Hysteria

- ✓ General weakness
- ✓ Voice becomes choked.
- ✓ Respiration gets ceased

- ✓ Pulse become weak
- ✓ Teeth starts making noise

Uncontrolled movement over half of the body [17].

Maseehul Mulk Hafiz Hakeem Ajmal Khan mentioned the following Sign and Symptoms. The disease occurs with fits. Fits can occur for few minutes, few hours and in some cases it occur for 2-4 days and mostly occur during menstrual period. First patient feels pain in the hip, watering of eyes, headache, patient become weak and lazy, darkness occur In front of eyes. After sometime a ball (gola) arise from the stomach of patient towards the throat and obstruct it, to which patient tries to swallow and asphyxia occurs. Rigidity occurs in the throat, belching, frequency of micturition increases, Heart beat increases and patient starts shouting and cries or starts laughing loudly and become faint and fall on the ground. The spasm occurs in her limbs, respiration increases and limbs become cold. Sometime patient pull her hairs and sometimes torn her cloths. She hates the people around her and tries to bite them. She struck her hand on the wall and take her fingers towards the throat again and again-indicates the sign of obstruction .When the disease starts disappear patient gasps and shivering starts and sometime lies calmly. At last she smile and fit ends and urination occur in more quantity [21].

Hakim Mohammad Hassan Qarshi mentioned the following clinical feature.

The clinical feature initiates from seizures commonly. They vary according to their severity.

- ✓ Most commonly, the patient feels mild pain on left side of pelvis, after which the sense of an air ball arising from stomach & obstructing pharynx is felt that compels the patient to make an attempt for its elimination for which she has recurrent deglutition. This causes asphyxia resulting into syncope.
- ✓ In mild cases, the syncope is not serious; therefore the patient is able to recover soon.
- ✓ Although, the patient succeeds to recover, she suffers from unbearable fatigue, headache, nuchal rigidity, flatulence, impaired digestion, palpitation, etc. Urinary incontinence & depressive moods are also common. If the condition is severe, the patient has shrill cry or she laughs madly & once sense of air ball reaching pharynx is felt, she soon fall on the ground.
- ✓ The patient beat her chest & bends her head backwards along with extending the neck upwards.
- ✓ Sometimes spasmodic condition of lymph is also reported & the patient tries to move the body forwards or backwards or even tends to fold her. Stiffness is accompanied with this.
- ✓ In some cases, the patient is as stiff as a tie or stiffening of one limb is also seen. Up & down movements are also evident.
- ✓ The patient beats her upper limbs here & there, blinks the eyes, ballooing of nostrils, compression of lower jaw without any ugly character of the face.
- ✓ A few patients also pull the hair, torn their clothes, banging on the wall & trying to chase the surrounding individuals.

Patient takes long & deep breath on rubbing her neck frequently; there is coldness of both the limbs.

- ✓ Therefore the duration of seizures ranges from minutes to few hours or 2-3 days. The Reoccurrence of the seizures depend upon the intensity & severity of the disease.
- ✓ Once the seizures subsides patient starts having breathlessness

along with tremors on being touched, gets anxious. Patient is calm & quite & laughs whole heartedly or cries loudly.

- ✓ Patient sleeps after vomiting.
- ✓ Many a time's few patients show fake symptoms in between the seizures, the senses are dumped. Sometimes, patient is often stubborn & irritable & gives a long explanation of her clinical features which is in excess in reality. She assumes them to be very critical & pretends to have fake seizures & pain at different sites in the body. Mostly she complains of hemiplegic, although the condition is rare.
- ✓ The patient complaint of incomplete symptoms such as inability to walk, although she is capable to stand without any support & walk. Moreover, there is no urinary or stool passage involuntarily, there is no facial or lingual paralysis, only she walks (crawling). In such individuals, the left aspect of the body is paralyzed. The subject is hypersensitive, complains of hoarseness of voice, nausea, hiccup, flatulence, palpitation, spasmodic cough are common^[20].

3. Management of hysteria

3.1 Principals of Management:

- ✓ When the episode of this occurs, then calf region of the patient should tightly bandage.
- ✓ Massage of the whole body should be done & close both nostrils & sprinkle rose water on her face & call the patient name very loudly^[18, 21, 23].
- ✓ Some foul smelling thing should be given to smell like raal, qabaan, jund bedastar, old degraded urine, onion, behroza (dissolved in vinegar). Give these things to smell so that their vapors reach the brain & heat the brain which will dissolve the cold humours of the brain & will make them light & less viscous & will place the uterus down which ascends & will make the uterus relax according to its dimension^[21, 23].
- ✓ Uterus avoids the foul smelling things & gets hurt due to their smell & bend towards the fragrant things. Give enema to uterus with roghan wa sameen, roghan khaloq which is fragrant, roghan mashoose, maisosan, etc. Fragrant things with some mushk & amber (dhooni) are effective. The main purpose of such regimen is to bring the uterus to its normal anatomical site^[23].
- ✓ Snuff is beneficial for Hysterical patient because it stimulates the physics which leads to evacuation of morbid humors^[17].
- ✓ If froth comes from the mouth it is good sign^[17]. Cupping over pubic region^[17].
- ✓ Emmenagogue and desiccants drugs should be given^[17, 21, 23].
- ✓ Venesection of saphenous vein^[17, 23].
- ✓ If the cause of this disease is retention of secretion then ask the patient to get married. Before that, exercise should be done & such medicine should be given which dries the fluids, example suddab, pudheena, tukhm-e-faranjmushk, jawarish kamooni & decoction of roots should be used. (Sheikh)^[23].
- ✓ If hysteria occurs to a pregnant lady then venesection should not be given. Then only Roghan-e-sosan, Roghan-e-paan, Roghan-e-naardeen, Roghan-e-balsaan like hot solution roghan should be taken^[21, 23].
- ✓ If there is constipation, then sana makki, red sugar should be used as laxative.
- ✓ Such types of enema & suppositories should be given which are calorific & diuretics & expel the viscous humours & expel the air.

3.2 Treatment (Dastoor-e-Ilaj):

Once the patient becomes stable, just giving iter & amber as pessary & the patient became healthy & the blood which gets accumulated in the uterus was expelled by the same therapy or by giving diuretics. By giving vapours (dhooni), there is expulsion of those things which can be expelled & that secretions/discharge which got blocked in uterus. 3-4 days after the episodes & the power have received then her complete treatment should be started. Treatment includes Evacuation (tanqiya) of the body with hab-e-iyraj & hab-e-muntan, ayaarij fiqrah, ayaarij laughzia, ayaarij banaedantoos & advice her to do vomiting. For this decoction should be used in which soya have been boiled & honey have been added & food should be taken before doing vomiting. Sakbeenj which is made up of vinegar of onion should be used for gargles & use honey for tanqiya of the body & after that, majoon damma (4.5 masha) should be given with majoon unnabi which is also known as sauter. Majoon kaknaj along with water in which tukhm-e-karafs, aneesoon, azyana have been boiled. Sometimes, it should be given sharu detoos (3.5 masha) & seldom gives her tiryaaq kabeer. If she is given the ma-ul-asool which has been described under treatment for amenorrhoea, which is also effective^[21, 23].

3.3 Ointment (Zimaad)

Aloea (Alva) Prunus lauroccrasus (Hab-ul-ghaar) (both 7.5 grams), Pistacia lentiscum (mastagi), h, Crocus sativus (saffron), Valisias jatamansi (Sumbul) (each 7 masha), Dorem ammoniacum (ushaq), Commpihora myrrh (murmakki) (each 10.5 masha). Grind the dried medicines & melt the dissolvable drugs in roghan-e-naardeen, & mix all the constituents & put zimaad on pubis symphysis & umbilicus. Zimaad of qailoosh hakeem is effective in this which is mixed with roghan-e-baboona, roghan soya & roghan sosan^[23]. Matricaria chamomilla (Baboona), Trigonella uncata (akleel-ul-mulk), Artemisia vulgaris (biranjasif), Artemisia absinthium (afsanteen romi), soya, Trianthema portuliacastrum (biskhapra), Mentha (fautanjokhi), pimpinella anisamm (aneesoon), Trigonella foeniculum (methi), Linum usitatissimum (Alsi) (each 5 grams). All should be boiled such that the drugs are above the water & boil it continuously & take 11.25 tola of that water & add roghan-e-khalooq & roghan-e-baboona & oil of soya (each 1 tola 5 grams) & do enema from this in vulva & it should be done with lukewarm drugs- it is effective^[17, 21, 2].

4. Reference:

1. Evans K, McGrath J, Milns R. Searching for schizophrenia in ancient Greek and Roman literature: a systematic review. Acta Psychiatrica Scandinavica 2003; 107: 323-330.
2. Qadeer A. Tareekh Tib wo Akhlaqiyat. 3rd ed. Delhi: Rabbani Printers; 2005: 32-41, 73-77.
3. Alqifti J. Tareekh Al Hukama (Urdu Translation). PNM; 1231 Hijri: 140-146.
4. Zillurrahman S. Aainah, Tareekh Tib. Aligarh: Muslim University Press; 2001: 9-17.
5. Vyas JN, Ahuja N. Text book of post graduate psychiatry. 2nd Ed. New Delhi: Jaypee Brothers Medical Publisher; 2003: 249-262.
6. Tabri AAM. Firdausul Hikmat (Urdu Translation by Awwal Shah M). Deoband: Faisal Publication; 2002: 138-139.
7. Razi AMBZ. Kitabul Fakhir (Urdu Translation). Vol 1st. New Delhi: CCRUM; 1997: 96-120.
8. Baalabaki M. Al Maurid. 5th ed. Beirut: Darul Ilm Lilmalayin; 2001: 121.
9. Kbeeruddin M. Kulliyate Nafeesi. New Delhi: Idara Kitabul Shifa; 1954: 100-106, 123-151, 161-166.
10. Kbeeruddin M. Tarjuma wo Sharah Kulliyate Qanoon. Vol. 1st.

- Delhi: Barqi Press; 1930: 120-155, 162-174.
11. Zaidi IH, Zulkifle M, Ahmad SN. *Tempramentology: A Scientific Appraisal of Human Temprament*. Aligarh: Dept. of Kulliyat AMU; 1999: 1-11.
 12. Zillur Rahman S. *Kitab Fil Mizaj Jalinus*. Aligarh: IbnSina Academy; 2008: 7, 101-127.
 13. Anonymous. *Theories and Philosophies of medicine*. 2nd ed. New Delhi: Institute of history of medicine and medical research; 1973: 84, 89-91, 118-121.
 14. Sigerist HE. *A history of medicine. Primitive and archaic medicine*. New York: Oxford University Press; 1951.
 15. Cosmacini G. *The long art: the history of medicine from antiquity to the present*. Rome: Oxford University Press; 1997.
 16. Ibne Sina Alqanoon –fil-tib(urdu Translation by Kantoori GH). vol-2nd. Delhi; idare kitabush shifa ;2007:354-357
 17. Zakaria Razi *Kitabul Hawi* (Urdu Translation) vol.9th New Delhi: CCRUM; 2001: 55-70
 18. Jurjani I. *Zakheerae Khawarzam Shahi* (Urdu Translation by Khan AH) vol. VI. Lucknow: Munshi Nawal Kishore; 1903: 590-596
 19. Kabeerudin Alakseer, New Delhi Ajaz publishing company; 2009: 795-797.
 20. Hakim Mohammad Hassan Qarshi *jamiul Hikmat* vol 1st YNM; 440-442.
 21. Khan Ajmal Haziq, Karachi Madiana publishing company; 1983: 476-481.
 22. Penso G. *Roman medicine*. 3rd ed. Noceto: Essebiemme; 2002.
 23. Majoosi ABA. *Kamilus Saana* (Urdu trans.by Kantoori GH) vol. ii. New Delhi: Idarae Kitabul Shifa; 2010: 456-458.