



## The Role and Significance of Sex Hormones in the Clinical Course of Primary Headaches

Khanifa Khalimova <sup>1</sup>, Nilufar Rashidova <sup>2</sup>, Zamira Khalimova <sup>3</sup>, Bakhtigul Holmuratova <sup>4</sup>,  
Rustambek Matmurodov <sup>5</sup>, Eldor Abdukodirov <sup>6</sup>

<sup>1, 2, 4, 5</sup> Tashkent medical academy

<sup>3</sup> Specialized scientific and practical Medical Center of Endocrinology

<sup>6</sup> Tashkent State Dental Institute

**Abstract:** Primary headaches, such as migraine (M), tension-type headache (TTH), cluster headache (CH), are still of great interest due to the absence of always obvious clinical signs, difficulties in diagnosis and diagnosis. It is no secret that there are specific differences in the clinical course of these types of headaches in men and women. In particular, the hormonal specificity of the clinical course of M disease has been thoroughly studied. Taking into account that TTH and CH have a specific course in the body of men and women, the role of hormones in this difference is important. In this article, we have analyzed and summarized the relevant literature of recent years, which studied the effect of female and male sex hormones on the clinical course of primary headaches.

**Keywords:** tension-type headache, migraine, pathophysiological mechanism, hormone trigeminovascular.

Chief pain - of humanity diary activities take to go serious effect doer condition is one how much primary head pains, including : migraine , tension head pain and cluster head pains as a result surface will come This head pain types male and a woman in the organism clinical in the past to himself special differences existence never to whom secret not Primary head pains between migraine ( M ) disease clinical in passing sexual of hormones place and importance the most a lot studied . Puberty up to age has been son children and girls between while M of spread (3-10%) sexually difference almost is available not [1,2]. Puberty age period hormonal changes reason migraine to men relatively 2-3 times in women more occurs , this while migraine of the disease to pass in women menstruation period, menopause , even , different hormonal contraceptive tools to drink too effect to do shows [1,3,4,5,6,7]. In women migraine with illness danger to men 3.25 times than high [8]. 35 to 45 years old has been women between disease the most a lot occurs , this common of men only 8 percent , total of women and 25-30 percent effect does [9]. From migraine suffering smoker a woman patients disease in them to men relatively heavier pass and pain leaver from drugs too more their use note reached [ 5,10 ].

In women migraine superiority pathophysiological mechanisms learning according to many studies conducted [11] . To obesity inclined has been in women episodic and chronic migraine meet two equal to more danger there is this fat in the tissues pathological estrogen work release with depends [12,13]. Reliable from sources to us It is known in the pathogenesis of migraine serotonergic system

plays a big role . [6]. to this system sexual hormones (estradiol and estrogen) as well own effect conducts [6,14,15]. Estrogen is also endogenous opioidergic the system activates and inflammation processes analgesic effect on reducing pain shows [16 ]. From this except estrogen blood in veins different inflammation processes to reduce too effect does [4,8,18].

Transferred studies that's it shows that progesterone hormone trigeminovascular in the system nociceptive activity reduction , neurogenic swelling and prostaglandins work release reduce through protection role plays [6,14].

Testosterone hormone role in migraine in women possible about one how many studies available [19,20]. Glaser and others for 3 months subcutaneous implantation through continuous testosterone therapy migraine headache in 92 % of patients to improve take that he came showed [14].

Menstrual migraine attacks while menstruation from sight of previous estrogen levels decline with is induced [21].

This hypothesis confirmation for of estrogen intramuscular injections menstruation from sight before sent and with that migraine seizures delayed [22]. Conversely , progesterone injections only menstruation to see to delay take came , however migraine not [22]. Recently conducted studies that's it confirms that estrogen decline migraine provoke possible [23,24]. Interesting that is , with migraine to those without migraine in women estrogen levels than faster decreases [25]. Menstruation saw 85 people with migraine a woman the patient with take went one retrospective in the study, 35.3% had migraine headaches menstruation of seeing to the end from the fall of estrogen a few days later reported that it has started. Authors assuming according to this kind of migraine headache hormonal changes with depends not blood loss because of with transient anemia depends [24]. Menstrual migraine hormonal treatment , for example , estrogen gel or transdermal estradiol patch menstruation during use less often , shorter and to less intensive attacks take coming possible [22]. Hormonal treatment from stopping after attacks repetition possible [8].

Also migraine with aura to men rather than in women a lot occurs . since 1988 after conducted one how much in studies aura of migraine spreading when studied , women between 2.6-10.8%, men between and 1.2-3.7 percent organize did [26]. Aural in migraine menstrual from miren different the amount of estrogen high in indicators will be [27]. Estrogen cortical sensitivity changes and cortical to the development of generalized depression contribution adds Depression spread amplitude to the level of estrogen depends [28].

In men while on the contrary, the clinical symptoms of migraine relatively steady and sharp without changes it will be too a woman in the organism hormonal to the migraine clinic of changes effect manifestation does On the contrary, in men throughout their lives of migraine pass relatively stable It seems that and in the migraine phenotype a woman sexual of hormones to himself special role shows [3].

Tension headache with illness according to two women superiority they do and to men relatively in women this type headache 1.5 times more occurs [3]. Clinical course of tension-type headache ( TTI ). of hormones effect relatively less studied . Some studies ZBO's menstruation period or pregnancy period different hormonal changes with depends cases increase about data given . In 40-60 percent of patients menstruation period enhancing ZBO factor being service to do possible [10]. Hormonal contraceptives to ZBO effect about while never how data no [29 ]. ZBO surface of arrival the most wide spread out risk factors stress, chronic fatigue and sleep disorders is considered So however , to the ZBO clinic sexual hormones own effect shows [30]. Some in women menstruation period ZBO appeared to be reason to be can also pregnancy and menopause also contribute to the clinical course of ZBO effect to do about data available [30, 31]. Transferred retrospective research to the results according to checked 38 to 46 percent of women has been in the part menstruation during headache increase defined [32,33]. Perimenopause during women headache in them to himself special properties have that and prevalence of ZBO much high the fact that reported [ 34 ] . During postmenopause prevalence of ZBO in women perimenopause period to women than high the fact that in studies proved [35]. Foreign from the literature assembled to information based on that say we

can, that is, to the clinical course of ZBO male and a woman in the organism sexual hormones own effect shows.

cluster headache (CHD) . to women relatively in men more occurs , especially medium old in men . Medium from the age after while of KBO meeting both gender representatives between becomes equal [36]. Cluster headache with sick male and a woman of testosterone levels in patients low and in treatment from testosterone use of headache through positive towards to change to see possible [36 ].

In literature of the KBO as quoted in women pass two phase

First the climax get period approximately 20 years of age right if it comes , the second the climax get period and for the period of 50-60 years right will come A woman clustered of patients mostly during menopause first KBO attack from the head forgive [35,37]. Cluster headaches in women of the estrogen hormone place about still sure data no [18]. H. Burger gave information according to the level of estrogen in menopause decline KBO provokes that guess is done , premenopause phase high estrogen levels while protection to the effect have to be possible [19 ].

From migraine different as a cluster headache traditional respectively men disease that is [12]. Cluster headache with sick male of patients characteristic physical aspects high testosterone levels to show possible although - however conducted in inspections of this the opposite [13]. Episodic and chronic cluster headache has been low testosterone levels in patients first noted in the 1970s done and later [4] re work developed Other one research episodic Low testosterone levels in KBO determined [16]. In cluster headaches the role of testosterone Stillman and others by was studied. Cluster headache 7 men who were and 2 women the patient's laboratory results checked. All 9 patients results in low serum testosterone levels showed. Male pure testosterone in patients or a woman of testosterone/ estrogen in patients combined therapy from added then the first 24 hours during pain to decrease achieved. Chronic cluster headache with 4 patients male headache in patients to remission was achieved [6].

Above from the literature received to information based on that's it we say possible cluster headache in men hormonal features complete studied although , but , a woman in the organism hormonal changes and between KBO dependence about sure data no [4].

Summary by doing that's it we say possible primary headaches each all three types (migraine, tension headache , cluster headache ) both gender representatives, that is , men too in women too occurs , however their spreading according to to sex special differences there is Headache pass a person in the organism different hormonal changes to the situation depends respectively changed stands Above statement done literature to the analysis based on without that's it we say maybe a woman and male in the organism sexual hormones some headaches in pathophysiology plays an important role . This problem according to is available literature by learning out of migraine suffering smoker a woman in patients especially the role of estrogen is good studied said to the conclusion our arrival can Not only migraine, but all in primary headaches sexual of hormones role sure explanation especially for both gender cluster headache and in tension headache again in detail studies transfer need

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