

Exploration on Meningioma Based on the Theory of “Yang Transforming Qi and Yin Constituting Form”

Congcong Yu, Furong Lv*

Shaanxi University of Chinese Medicine, Xianyang 712046, Shaanxi, China

*Correspondence Author

Abstract: *Meningioma is the most common primary tumor of the central nervous system, accounting for approximately 30% of all primary intracranial tumors. It is more prevalent in middle-aged and elderly women, typically occurring between 40 and 60 years of age [1]. Although most meningiomas are benign, their unique growth locations often cause clinical manifestations such as headache, epilepsy, nausea, vomiting, and papilledema; in severe cases, it can even be life-threatening. The primary treatment modalities in modern medicine include regular imaging follow-up and surgical resection. However, surgery may leave behind serious complications such as aphasia, hemiplegia, and coma, contributing to a high disability rate [2]. Furthermore, ideal pharmacological interventions remain lacking for tumors that are difficult to resect surgically or are recurrent. Therefore, exploring safe and effective treatment strategies holds significant clinical importance. In Traditional Chinese Medicine (TCM), meningioma is categorized under “headache,” “vertigo,” “vomiting,” and “seizure disorders” [3]. It is believed that the disease site is the brain, closely related to the heart, spleen, and kidney. The core pathogenesis lies in deficiency of the primordial yang, allowing cold-dampness yin pathogens to invade the yin position. Based on the principle of “yang transforms qi, yin constitutes form” from the Suwen: Great Treatise on the Interaction of Yin and Yang, yang qi deficiency leads to impaired qi transformation, causing yin-cold pathogens to condense and accumulate into form over time, gradually forming a tumor. Therefore, warming and supplementing the primordial yang, supporting yang, and dissipating masses should be the fundamental treatment principle for this disease. This paper aims to systematically review the Western medical pathological mechanisms and TCM etiology and pathogenesis of meningioma, deeply explore the intrinsic connection between the “yang transforming qi and yin constituting form” theory and the formation of meningioma, and analyze the theoretical basis and clinical applicability of the method of supporting yang and dissipating masses (such as using Yanghe Decoction, Yougui Pill, and Gong’ai Duoming Decoction) in treating this disease, in order to provide new ideas and theoretical support for the TCM treatment of meningioma.*

Keywords: Meningioma, Yang Transforming Qi and Yin Constituting Form, Primordial Yang Deficiency, Supporting Yang and Dissipating Masses Method, TCM Pathogenesis.

1. Introduction

Meningioma is a common benign intracranial tumor of the nervous system, growing slowly, although a minority may be malignant. In recent years, the incidence of meningioma in China has been increasing annually, accounting for 30% of primary tumors, with a higher prevalence in females than males, typically occurring between 40 and 60 years of age [1]. The clinical manifestations of meningioma are primarily due to increased intracranial pressure, often with headache and epilepsy as the initial symptoms, accompanied by significant nausea, vomiting, and papilledema. Clinical manifestations are closely related to the tumor’s location. The main treatments for meningioma in modern medicine are regular follow-up and surgical intervention. Surgery may result in aphasia, coma, hemiplegia, etc., with a high disability rate [2]. TCM classifies it under categories such as “headache,” “vertigo,” “vomiting,” and “seizure disorders” [3]. TCM holds that the disease site of meningioma is the brain, involving the heart, spleen, and kidney. Deficiency of primordial yang, with cold-dampness yin pathogens invading the yin position, is the pathological basis of meningioma. Therefore, deficiency of primordial yang is considered the core pathogenesis. This article aims to discuss the feasibility of treating meningioma with the method of supporting yang and dissipating masses based on the “yang transforming qi and yin constituting form” theory, summarized as follows:

2. Western Medical Physiology and Pathology of Meningioma

According to modern medical research, the occurrence and development of meningioma involve multiple complex pathological mechanisms, not yet fully explained by a single theory. Research primarily focuses on molecular genetic abnormalities, hormonal regulation, and the tumor microenvironment.

The molecular genetic theory is the most central mechanism currently explaining the pathogenesis of meningioma. Approximately 50% of sporadic meningiomas harbor inactivating mutations in the NF2 gene (located on chromosome 22). The protein encoded by this gene, Merlin, has tumor-suppressive functions; its inactivation leads to abnormal activation of multiple pro-cancer signaling pathways (such as Ras/Raf/MEK/ERK, PI3K/Akt/mTORC1), driving tumor growth. In meningiomas with normal NF2 genes, mutations in genes such as TRAF7, KLF4, AKT1, and SMO have been discovered [4]. These mutations are closely associated with specific pathological subtypes (e.g., secretory type). TERT promoter mutations and CDKN2A/B gene deletions are key molecular events driving tumor transformation from benign to malignant (WHO Grade 3) [5].

The hormone and receptor theory is also crucial. The

incidence of meningioma is significantly higher in women than in men, and tumor growth may be affected by the menstrual cycle and pregnancy. The vast majority of meningioma cells express progesterone receptors, with some expressing estrogen and androgen receptors. This suggests that sex hormones may promote tumor cell proliferation by binding to their receptors [6].

Furthermore, the microenvironment and cellular stress theory has also gained attention. Studies have found that in WHO Grade 1 (benign) meningiomas, autophagic activity is relatively high, possibly acting as a protective mechanism to suppress tumorigenesis. In high-grade meningiomas, autophagic activity is typically absent, leading to disruption of cellular homeostasis. Dysregulation of the tumor cell cycle control mechanisms leads to unlimited cell proliferation [7].

The pathological process of meningioma encompasses a continuous spectrum from benign proliferation to malignant evolution. Cell proliferation and morphological changes involve the abnormal proliferation of neoplastic arachnoid cap cells, forming different morphologies such as syncytial and fibrous types. Characteristic psammoma bodies (calcified structures) can be seen within some tumors. Invasion and malignant progression occur when some benign meningiomas progress to atypical (WHO Grade 2) or anaplastic (WHO Grade 3) meningiomas. Pathologically, this is manifested as significantly increased cell density, nuclear atypia, necrosis, increased mitotic activity, and clear brain tissue invasion. Formation of special structures includes cystic changes in a minority of tumors (forming cystic meningioma), which may be related to intratumoral ischemic necrosis or secretion accumulation [8].

According to the World Health Organization (WHO) grading criteria, meningiomas can be classified into Grades I, II, and III. WHO Grade 1 (Benign) accounts for approximately 80% of cases, grows slowly, and has a low recurrence risk. WHO Grade 2 (Atypical) accounts for about 15%-20%, has a higher recurrence risk, and shows increased mitotic activity or brain invasion. WHO Grade 3 (Malignant/Anaplastic) accounts for about 1%-3%, is highly invasive, has a high recurrence rate, and short patient survival [9].

3. TCM Etiology and Pathogenesis

Meningioma is classified under categories such as “headache,” “vertigo,” “vomiting,” and “seizure disorders.” TCM believes the disease site is the brain, involving the heart, spleen, and kidney. The pathological basis of meningioma is deficiency of primordial yang, allowing cold-dampness yin pathogens to invade the yin position. The formation of meningioma is precisely the result of the combined effect of insufficient “yang transforming qi” function and excessive (abnormal) “yin constituting form.” When yang qi fails to distribute, yin-cold condenses, which becomes the pathological basis for meningioma formation. The *Suwen: Treatise on the Communication of Vital Energy* states: “Yang qi is to the human body as the sun is to the heavens. If it loses its proper place, life is shortened and fails to flourish.” Limited by ancient examination methods, ancient physicians mostly treated based on symptoms like “headache,” “epilepsy,” and “vertigo.” Although there was no name for “meningioma,”

treatment often focused on “phlegm, blood stasis, and turbidity,” using methods of transforming phlegm and softening hardness, breaking blood stasis and expelling stasis. Representative formulas and medicinals included unprocessed *Arisaema* (Sheng Nanxing), *Sargassum* (Hai Zao), *Thallus Laminariae* (Kun Bu), and *Scorpio* (Quan Xie). Based on this inheritance, modern physicians have further deepened the understanding into a complex pathogenesis of “wind, phlegm, stasis, toxin, and deficiency,” with the disease site involving the brain, liver, spleen, and kidney. Treatment pays more attention to combining liver-soothing and spleen-fortifying, kidney-tonifying and essence-supplementing, and seizing the opportunity to eliminate turbidity, skillfully using wind-dispelling medicinals as channel-guiding drugs. The author believes that although core prescriptions have evolved, transforming phlegm and dissipating masses has consistently been the main thread running through ancient and modern treatments. In summary, the formation of meningioma is closely related to yang qi deficiency and cold-dampness yin pathogens ascending counterflow. Its fundamental pathogenesis lies in the insufficiency of the “yang transforming qi” function and the abnormality of the “yin constituting form” function. Treatment requires addressing both the root and the branch by warming and tonifying yang qi to restore the body’s normal qi transformation function, while simultaneously using methods to transform phlegm, dispel stasis, and resolve toxins to dissipate the already formed masses.

4. The Connection Between Meningioma and “Yang Transforming Qi, Yin Constituting Form”

4.1 Meningioma is Caused by Primordial Yang Deficiency

The *Huangdi Neijing* states: “Yin is often in excess, yang is often insufficient” and “After forty, yang qi is naturally halved.” Renowned old TCM doctor Li Ke stated: “Wherever yang qi fails to reach, there is disease” [10]. When yang qi cannot disperse, yin-cold condenses, which becomes the pathological basis for meningioma formation. The *Suwen: Treatise on the Communication of Vital Energy* states: “Yang qi is to the human body as the sun is to the heavens. If it loses its proper place, life is shortened and fails to flourish.” The *Lingshu: Oral Inquiry* states: “When upper qi is insufficient, the brain feels empty and unfulfilled.” The *Jingui Yaolue* states: “For diseases of phlegm-fluid retention, warm medicinals should be used to harmonize it.” Primordial yang, also known as kidney yang, is the root of all yang qi in the body, also called “true fire” or “life gate fire.” “Wherever yang qi fails to reach even slightly, there lies the disease; wherever yang qi can be made to reach, there lies the medicine.” During treatment, restoring yang qi’s function of warming and qi transformation in the brain will cause yin-cold to dissipate spontaneously and the tumor to resolve naturally.

4.2 Yang Transforms Qi, Yin Constitutes Form

This theory originates from the *Suwen: Great Treatise on the Interaction of Yin and Yang*. During the Tang Dynasty, Wang Bing, when compiling and annotating the *Huangdi Neijing*, organized this section. Later, Ming Dynasty physician Zhang

Jiebin (Zhang Jingyue) commented in his *Leijing*: “Yang moves and disperses, thus transforming qi; yin is still and condenses, thus constituting form,” becoming the classic annotation explaining this theory. “Yang transforming qi” refers to yang qi’s functions of promoting, warming, and qi transformation, capable of transforming matter into intangible energy and functional activities. “Yin constituting form” refers to yin essence (blood, body fluids, etc.) possessing functions of stillness and condensation, capable of constituting tangible body tissues [11]. The two, yin and yang, are mutually rooted and interdependent.

4.3 Primordial Yang Deficiency is the Core Pathogenesis of Meningioma

Primordial yang, namely kidney yang, is the root of all yang qi in the body, also known as “true fire” or “life gate fire.” Primordial yang is the fundamental source of the body’s yang qi, stored in the kidney (life gate), and is the driving force of life activities. Like the sun in the sky, it shines over the entire body, warming the zang-fu organs and promoting qi transformation. The head is located at the highest point of the body and belongs to the “yang position” [12]. The three yang channels of both the hand and foot all ascend to the head and face, hence the *Lingshu: Pathogenic Factors, Zang-fu Organs and Body Forms* states: “The confluence of all yang channels is in the face.” If primordial yang is insufficient, essence and nutrients cannot ascend to nourish the brain marrow, yang qi cannot warm the brain orifices, and the diminished qi transformation function leads to cold-dampness yin pathogens ascending counterflow.

5. Application of the Supporting Yang and Dissipating Masses Method in the Treatment of Meningioma

Treatment should adhere to the general therapeutic principle of “Nourishing the source of fire to dispel the yin shadow.” When kidney primordial yang is insufficient and yin-cold is internally exuberant, treatment should warm and tonify kidney yang, allowing sunlight to shine everywhere and yin shadows to dissipate spontaneously. *Yanghe Decoction* [13] is the ancestral formula for warming yang, dissipating cold, and transforming phlegm to eliminate masses. Its composition mainly includes prepared *Rehmannia root* (Shu Di), *Deerhorn Glue* (Lu Jiao Jiao), *Cinnamon Bark* (Rou Gui), *charred Ginger* (Pao Jiang), *Ephedra* (Ma Huang), *White Mustard Seed* (Bai Jie Zi), and *Licorice* (Gan Cao). Shu Di and Lu Jiao Jiao tonify the kidney and replenish essence, warming and nourishing the primordial yang; Rou Gui and Pao Jiang warm the interior and dissipate cold, assisting yang in transforming qi; Ma Huang diffuses and unblocks yang qi, guiding the medicinals to reach the exterior; Bai Jie Zi transforms phlegm and dissipates masses, particularly adept at treating phlegm located beyond the skin and membranes. *Yougui Pill* can also be used to warm and tonify kidney yang, replenishing essence and benefiting marrow, suitable for cases with severe primordial yang depletion, marked by soreness and weakness of the lower back and knees, fear of cold, and cold extremities. Old TCM doctor Li Ke also used “*Gong’ ai Duoming Decoction*.” For brain tumors, Li Ke often used: *Aconite* (Fu Zi), *dried Ginger* (Gan Jiang), *Cinnamon Bark* (Rou Gui), *Honey-processed Licorice* (Zhi Gan Cao), *unprocessed*

Arisaema (Sheng Nan Xing), *unprocessed Pinellia* (Sheng Ban Xia), *White Mustard Seed* (Bai Jie Zi), *Sargassum* (Hai Zao), *Licorice* (Gan Cao), *Scorpio* (Quan Xie), *Centipede* (Wu Gong), and *Deerhorn Residue* (Lu Jiao Shuang) [14].

6. Conclusion

Meningioma is the most common primary tumor of the central nervous system. Modern medicine primarily focuses on surgery and radiotherapy, but effective long-term management strategies are lacking for cases that are inoperable, recurrent post-surgery, or accompanied by severe complications [15]. Exploring the theoretical basis and clinical pathways for TCM intervention in meningioma holds significant practical importance. This article, based on the “yang transforming qi, yin constituting form” theory, systematically explains the TCM etiology and pathogenesis of meningioma. The disease site of meningioma is the brain, involving the heart, spleen, and kidney. The core pathogenesis is primordial yang deficiency, where yang qi fails to warm the brain orifices and promote qi transformation, causing cold-dampness yin pathogens to condense in the yin position, accumulating over time to form a tumor. The *Suwen: Great Treatise on the Interaction of Yin and Yang* states: “Yang transforms qi, yin constitutes form.” The waxing and waning of yang qi determines the balance of transformation between matter and energy in the body. Insufficient “yang transforming qi” leads to impaired qi transformation, obstructed fluid distribution, and intermingling of phlegm and stasis, gradually forming tangible masses. The brain is the “confluence of all yang channels,” relying most heavily on the warmth and nourishment of yang qi, yet also being most prone to invasion by yin pathogens when yang qi fails to reach. Primordial yang, namely kidney yang, is the root of all yang qi. When primordial yang is depleted, essence fails to ascend, yang fails to provide warmth, cold-dampness generates internally, and turbid yin floods upwards, eventually resulting in tumor disease. Although ancient and modern physicians have different treatment emphases, transforming phlegm and dissipating masses has always been the main treatment thread. The method of supporting yang and dissipating masses proposed in this article is a theoretical innovation built upon this foundation. Treatment adheres to the principle of “Nourishing the source of fire to dispel the yin shadow,” taking warming and tonifying the primordial yang as the core, supplemented by methods of transforming phlegm, dispelling stasis, and dissipating masses to address both the root and branch. Clinically, formulas such as *Yanghe Decoction*, *Yougui Pill*, or Li Ke’s “*Gong’ ai Duoming Decoction*” can be selected, embodying the clinical thought that “Where yang qi fails to reach, there lies the disease; where yang qi can reach, there lies the medicine.” In summary, differentiating and treating meningioma based on the theory of “yang transforming qi, yin constituting form” aligns with the TCM theory of yin and yang, providing new ideas for the TCM treatment of meningioma. The method of supporting yang and dissipating masses, with warming and tonifying the primordial yang as the root and transforming phlegm and dissipating masses as the branch, embodies the principle of treating disease by seeking its root. Currently, related research is mostly theoretical exploration. In the future, standardized clinical studies and experimental mechanism research should be conducted to provide evidence-based medical support for

the application of this theory.

References

- [1] Ren Qianlang, Bai Gang, Wang Haonan, et al. Epidemiological analysis of 771 cases of meningioma [J]. *Journal of Kunming Medical University*, 2023, 44(2).
- [2] Zhang Xin, Shi Quanhong. Latest research progress on meningioma-associated epilepsy [J]. *Advances in Clinical Medicine*, 2025, 15: 555.
- [3] Gao Yunpeng, Fan Xiaoxuan, Wang Xinyue, et al. Zhao Xiaoping's experience in treating post-operative meningioma based on syndrome differentiation of "brain marrow - brain qi - brain spirit" [J]. *Shaanxi Journal of Traditional Chinese Medicine*, 2025, 46(03): 381-385.
- [4] Li Xiaojie, Zhu Sipeng, Wu Zhen. Research progress on drug therapy for meningioma [J]. *Tumor*, 2024, 44(09): 905-915.
- [5] Jia Muyuan, Li Ze, Liu Yuyang, et al. Progress in multidisciplinary diagnosis and treatment of familial brain tumors [J]. *Cancer Research on Prevention and Treatment*, 2024, 49(6): 514-521.
- [6] Bu Xingyao, Li Chaoyue, Zhao Yuewu, et al. Relationship between expression of estrogen and progesterone receptors and biological behavior and prognosis in patients with meningioma [J]. *Chinese Journal of Clinical Rehabilitation*, 2005, 9(6): 98-99.
- [7] Yang Xiaohong, Chen Xuyong, Ying Zhuopeng, et al. Bioinformatics analysis of characteristic genes related to autophagy and ferroptosis in glioma [J]. *Journal of Hainan Medical University*, 2025, 31(14).
- [8] Li Qi, Fu Dengli. Research progress on peritumoral brain edema in meningioma [J]. *Advances in Clinical Medicine*, 2025, 15: 1224.
- [9] Han Tao, Zhou Junlin. Research progress in imaging of grading and subtyping of meningioma [J]. *Chinese Journal of Magnetic Resonance Imaging*, 2021, 12(7): 94-97.
- [10] Li Ke. *Li Ke's Collection of Clinical Experience in Acute, Critical and Difficult Diseases* [M]. Taiyuan: Shanxi Science and Technology Press, 2002.
- [11] Liu Siyuan, Li Yang. Exploring the effect of mitophagy on atherosclerosis based on "Yang transforming Qi, Yin constituting Form" [J]. *Advances in Clinical Medicine*, 2025, 15: 1510.
- [12] Li Zijuan, Chen Zuolong. Discussion on the treatment of benign prostatic hyperplasia based on "Life Gate theory" [J]. *Advances in Clinical Medicine*, 2025, 15: 50.
- [13] Wang Zhenying, Jia Wentao. New clinical applications of Yanghe Decoction [J]. *Acta Chinese Medicine and Pharmacology*, 1990(5): 39-42.
- [14] Yu Fengying. Academic experience of old TCM doctor Li Ke in treating tumors [J]. *Chinese Journal of Integrated Traditional and Western Medicine in Intensive and Critical Care*, 2009, 16(1): 10-10.
- [15] Yang Xiaopeng, Zhang Qian. Research progress on clinical features and recurrence-related factors of WHO Grade II atypical meningioma [J]. *Journal of Clinical Neurosurgery*, 2022, 19(3).