



WOMEN'S HEALTH

Acupuncture and Herbal Treatment for Migraine in a PCOS Patient: Case Report

PATIENT'S 10/10 MIGRAINE LINKED TO ORAL BIRTH CONTROL PILLS

Xueling Guo, DTCM, MS | DIGITAL EXCLUSIVE

WHAT YOU NEED TO KNOW

- Oral contraceptive pills (OCP) are the first-line therapy for Polycystic Ovary Syndrome (PCOS) patients.
- However, these medications can cause adverse effects such as nausea, headaches, and hypertension.
- Traditional Chinese medicine (TCM) has demonstrated efficacy in managing these side effects and improving the quality of life of affected patients, as demonstrated in this case study.

Oral contraceptive pills (OCP) are the first-line therapy for Polycystic Ovary Syndrome (PCOS) patients.¹⁻² However, these medications can cause adverse effects such as nausea, headaches, and hypertension.³ Traditional Chinese medicine (TCM) has demonstrated efficacy in managing these side effects and improving the quality of life of affected patients.

This is a case of a patient with severe headache associated with OCP use that describes how TCM modalities were employed to effectively manage these adverse effects.

The Case: Intake

On 12/16/2022, a 20-year-old female patient (4'1" 67.6 kg) with a medical history of PCOS presented with a chief complaint of severe, persistent occipital headache. The patient had been prescribed an OCP (Tarina) by her gynecologist about one year prior, which was discontinued six months ago due to the persistence of the 10/10 intense headache.

Her gynecologist adjusted her OCP by lowering the progesterone dosage, but it didn't work with the headache. The patient also consulted her neurologist and received an MRI (07/11/22), which showed left mild ethmoid and maxillary sinus disease and yielded a diagnosis of intractable headache. OTC painkillers including Tylenol and Motrin did not provide relief.

During the intake on the day of her visit, this patient presented with a sharp, tight, and stabbing headache at a pain level of 10/10, worse at night, and accompanied by photophobia. She denied aura, nausea, vomiting, and fever. Additionally, she reported high blood pressure after taking Tarina, with a reading of 138/50 on that day.

She had a high thirst and always craved cold drinks. Constipation was also noted, with a bowel movement occurring only once a week and being difficult to pass. The patient's tongue was pale with a thin white coat and her pulse was thin. Intermittent bleeding was reported prior to commencing the OCP, and currently, her menstrual cycle is irregular, with small menstrual volume and brown menstrual blood with clots.

Diagnosis and Treatment

The patient was diagnosed with headache of blood deficiency with underlying blood stasis pattern. To treat this, manual acupuncture was performed at Liv 8, SP 6,10, Liv 3, ST 25,37, 36, and LI 4, using a combination of 0.25x30 mm and 0.25x40 mm needles. The needles were retained for 30 minutes, and acupuncture was administered once a week for a total of one month.

In addition to acupuncture, *Dang Gui Bu Xue Tang* was prescribed, which included 30 g of *huang qi* (*Radix astragali*) and 6 g of *dang gui* (*Radix angelicae sinensis*). The herbs were vacuum-packed and the patient was instructed to take them twice a day: once before breakfast and lunch, and another before dinner. This regimen was also followed for one month.

Results

During the patient's second visit, which occurred one week after the initial treatment, she reported a reduction in her headache intensity from 10/10 to 5/10. Her blood pressure at the time of the visit was 108/70.

During the patient's third visit on 12/30, which occurred another week later, she reported that her headache intensity had decreased even further to 3/10. Additionally, she reported a significant improvement in her constipation, with bowel movement frequency increasing from once a week to once a day.

On her third visit, which was three weeks after the initial visit, the patient reported that she had stopped taking the formula for one week. Her blood pressure increased again and back to 130/80. Her headache level was 3/10. The patient was educated to continually take the formula.

During the patient's fourth visit, which occurred one month from the initial visit, her headache intensity was reported to be only 1/10, and her blood pressure was 102/70.

Discussion

This report provides evidence supporting the effectiveness of acupuncture and Chinese herbal medicine in treating intense chronic headaches. The patient under consideration had a history of abnormal bleeding, which could lead to blood deficiency over time. As blood is considered the commander of *qi*, a deficiency in blood could further lead to a deficiency in *qi*.

Qi, in turn, is responsible for the smooth flow of blood, and thus, a deficiency in *qi* can lead to blood stasis. When the patient takes OCPs, menstruation stops, which can further lead to blood stasis and *qi* stasis, resulting in intense headaches and hypertension.

The treatment plan for the patient's chronic headaches involved tonifying and moving blood, with a focus on the liver and spleen meridians. Liv 8 is used to nourish and tonify blood, while Liv 3 and LI 4 are used in combination to move blood. SP 6 and SP 10 are used to tonify and move blood in the spleen meridian. ST 25 and ST 37, which are the front-*mu* and lower *he sea* points of the large intestine, are used to aid in bowel movement, which may also be affected by blood deficiency.

This case presents several significant takeaways. First, the pattern observed in this case, i.e., headache of blood deficiency pattern, is rare in a 20-year-old female patient. Nonetheless, after thoroughly examining her medical history, symptoms, tongue, and pulse, a diagnosis of blood deficiency with blood stasis was made, and treatment principles were established, which were ultimately proven to be effective.

Another noteworthy aspect of this case is the use of *huang qi*, a medicinal herb with a variety of therapeutic benefits. The original thinking was to use *Dang Gui Bu Xue Tang* to adjust the blood deficiency. However, *huang qi*, as a primary herb used to tonify *qi*, has been considered to be contraindicated in the case of hypertension.

There has been various research regarding the effect of *huang qi* on blood pressure. Modern pharmacological studies have shown that *huang qi* has a dual regulatory effect on blood pressure.^{4,7} Its hypotensive effect is attributed to the dilation of blood vessels and the increase in nitric oxide (NO) release, which affects the renin-angiotensin-aldosterone system (RASS) and diuresis.⁴

When it comes to hypertensive effect, it is found that Astragaloside IV, the major chemical ingredient of *huang qi*, is effective for positive inotropic action, which improves both cardiac systolic and diastolic functions without increasing myocardial oxygen consumption. This results in an increase in cardiac contraction amplitude and cardiac output, leading to an elevation of blood pressure.⁴

There are also studies supporting that the bidirectional regulatory effect of *huang qi* on blood pressure is related to the dosage. For instance, some studies suggest a dosage of *huang qi* more than 30 g is effective for lowering the blood pressure, while less than 30 g is effective to increase the blood pressure.⁵ However, more studies are needed.

Clinical Takeaway

In this case, acupuncture and herbal medicine were effective treatment options for the patient's headaches and increased blood pressure associated with side effects of OCPs. The patient received acupuncture treatment once a week for four weeks and took the herbal formula as directed. After four weeks of treatment, the patient reported a reduction in the severity and frequency of her headaches, and a decreased blood pressure. This supports the efficacy of TCM in treating headaches associated with the migraine side effect of OCP.

References

1. Pinkerton JV. Polycystic Ovary Syndrome (PCOS). *Merck Manual* (Professional Version), 2023. [Read Here](#)
2. Bednarska S, Siejka A. The pathogenesis and treatment of polycystic ovary syndrome: what's new? *Adv Clin Exp Med*, 2017;26(2):359-67.

3. Cooper DB, Patel P, Mahdy H. *Oral Contraceptive Pills*. Treasure Island, FL: StatPearls Publishing, 2022.
4. Cha Y. The bidirectional regulatory effect of Huangqi on blood pressure. *J Trad Chinese Med Sci*, 2000(06):329.
5. Li R, Zhang Y. Research progress in the treatment of primary hypertension with *huangqi*. *Guang Ming Zhong Yi*, 2021;36(18):4.
6. Xu Z, Qian L, Niu R, et al. efficacy of *huangqi* injection in the treatment of hypertensive nephropathy: a systematic review and meta-analysis. *Front Med*, 2022;9:838256.
7. Peng X, Tang F, Yang Y, et al. Bidirectional effects and mechanisms of traditional Chinese medicine. *J Ethnopharmacol*, 2022;298:115578.

JUNE 2024