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# Analysis of the Effect of Shenghua Zhuyu Herbal Acupoint Plaster in the Treatment of Postpartum Malodor

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**Abstract:** *Objective:* To assess the clinical effect of Shenghua Zhuyu ointment, which was applied onto the Zhongji, Qihai, and Guanyuan acupoints, on postpartum lochia. *Methods:* We randomly divided 166 patients who were admitted in 2018–2021 into an observation group and a control group. The control group was treated with conventional clinical methods, whereas the observation group was treated by applying Shenghua Zhuyu ointment on the Zhongji, Qihai, and Guanyuan acupoints. The amount and duration of lochia, abdominal pain, hospitalization time were observed; B-scan ultrasonography was performed to check whether the placenta was discharged. *Results:* The treatment received by the observation group of patients was shown to be more effective than that of the control group. Besides, the experimental group had less lochia than that of the control group. The observation group also had shorter duration of lochia and hospital stay than those of the control group ($P < 0.05$). The placenta excretion was better, and the degree of abdominal pain was lower in the observation group than those of the control group ($P < 0.05$). *Conclusion:* The acupoint application of Shenghua Zhuyu herbal acupoint plaster has a significant impact on retained placenta, in which it can aid the discharge of residual placenta and improve the patients' physical functions and symptoms.

**Keywords:** Shenghua Zhuyu herbal acupoint plaster; Postpartum lochia; Acupoint application

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## 1. Introduction

Postpartum uterine involution occurs after delivery. According to relevant reports, in China, more than 20 million women every year experience varying degrees of poor uterine involution, and this condition is increasing year by year [1]. One of the main manifestations of incomplete postpartum involution is persistent lochia. Prolonged lochia can easily lead to late postpartum hemorrhage, induce pelvic inflammatory disease, menstrual abnormalities, secondary infertility, and other complications, which will threaten the physical and mental health of the parturient [2].

One of the main reasons for incomplete uterine involution is due to the presence of retained placenta and decidua after delivery, which often leads to late postpartum hemorrhage, which is a common obstetrical complication. Incomplete uterine involution is more common among patients who have undergone intrauterine operations such as dilation and curettage abortion and internal genital infections. It is often manifested as persistent vaginal bleeding, abdominal pain, prolonged lochia, which is one of the causes of puerperal hemorrhage and significantly affects the physical and mental health of postpartum women [3].

Traditional Chinese medicine believes that there are two main causes of postpartum lochia. One is qi deficiency and blood stasis, and the other is yin deficiency and blood heat. Massive vaginal bleeding during childbirth or postpartum, or labor pain stimulates energy consumption and hurts yin, and overworking during postpartum and early labor lead to weak qi and blood. Deficiency of qi means that the Chongren is not solidified, and blood cannot be taken in, causing qi deficiency and the inability of qi to absorb body fluid can cause the essence and blood to overflow out the veins, so it can be manifested as persistent postpartum lochia [4]. At present, surgical methods such as chemotherapy or curettage are often used at home and abroad to treat patients with retained placenta and decidua after delivery, which will cause great damage to the patient's body [5]. Therefore, obstetricians and gynecologists still face a dilemma in choosing the treatment method for postpartum uterine cavity. In Chinese medicine, there is no diagnosis of retained placenta and fetal membranes, and it is classified as "incomplete removal of postpartum lochia and placenta," and the principle of treatment is to activate blood circulation and remove blood stasis and heat and nourish yin [6].

Traditional herbal acupoint plaster has lower percutaneous absorption compared to oral administration of medicine, and the duration of application is long, with slow effects, resulting in slow relief and improvement of acute pain symptoms. In this study, we used Shenghua Zhuyu herbal acupoint plasters and external treatment to treat retained placenta and lochia, and a good curative effect was achieved.

## 2. Materials and methods

### 2.1. Research object

#### 2.1.1. Inclusion and exclusion criteria

Inclusion criteria: (1) follow-up is available, and the data are complete; (2) no organic disease, chronic disease, and mental and psychological disease; (3) voluntary participation; (4) Patients who were admitted to our hospital and met the relevant diagnostic criteria of the "Guidelines for the Treatment of Common Gynecological Diseases in Chinese Medicine" [6]; (6) Parturient aged 20–45 years.

Exclusion criteria: (1) unreliable follow-up and incomplete clinical data; (2) Women aged < 20 or > 45; (3) Suffering from organic diseases, mental diseases, and chronic diseases; (4) Those with drug allergies.

#### 2.1.2. Basic information of patients

There are 166 patients with postpartum residual placenta from 2018 to 2021. All patients were clinically diagnosed with retained placenta through B-scan ultrasonography and hysteroscopy after delivery. The patients were randomly divided into a control group and an observation group. The observation group consisted of 83 cases, aged 22–43 years old, with an average of 30.13 ± 5.23 years old; the control group consisted of 83 cases, aged 23–44 years old, with an average of 31.54 ± 4.60 years old.

### 2.2. Method

#### 2.2.1. Treatment method

In the observation group, Shenghua Zhuyu herbal acupoint plasters were applied on the acupoints combined with external treatment. Drug composition: 15 g peach kernel, 20 g *Rhizoma Corydalis*, 1.5 g Ligusticum wallichii , 1.5 g *Angelica sinensis* , 10 g licorice, 10 g dried ginger. The medicine was ground into a powder form, and after being fully mixed, an appropriate amount of the powder and medical grade Vaseline were fully mixed and made into a paste. Six hours after delivery, the patient took a supine position, and the medicine was applied on three acupoints of Zhongji, Qihai, and Guanyuan, twice a day, for 5 consecutive days. The patients in the control group were given routine postpartum care by medical staff. The medical staff provided assistance whenever needed and tried to meet their demands. Patients were encouraged to get out of bed and do some activities 24 hours after delivery to facilitate their recovery.

### 2.2.2. Observation indicators

The efficiency of treatment, the amount and duration of lochia, abdominal pain, length of hospital stay, and the intrauterine conditions were observed and recorded.

$$\text{Rate of effectiveness} = (\text{Very effective} + \text{effective})/\text{total number of cases} \times 100\%$$

The treatment was considered ineffective if the uterine cavity was not clean and the painful contractions of the uterus did not disappear. If there was bloody malodorous discharge but there is still mild uterine contraction pain, the treatment was considered effective. If there is no discharge of bloody malodorous discharge and painful uterine contractions disappear, the treatment was considered very effective. The condition of lochia of the two groups after delivery were observed, and the duration of lochia were recorded. The amount of lochia within 5 days after delivery were weighed. In addition, the length of hospital stay was recorded. B-scan ultrasonography was performed again after treatment to see if there is retained placental membrane.

### 2.2.3. Statistical methods

SPSS 22.0 software was used for the analysis of experimental data. A *t*-test was performed to compare the data of two groups, and the data were expressed as mean ± standard deviation; an $\chi^2$ test was performed to compare the count data, $P < 0.05$ indicated statistical significance.

## 3. Results

After 5 days of treatment, both treatments showed curative effects with no side effects.

### 3.1. Curative effect of both treatments

The rate of effectiveness of the observation group (acupoint herbal plaster) was 95%, which was higher than that of the control group (conventional treatment), which was 84%. There was a statistically significant difference between rate of effectiveness the two treatments ($P < 0.05$), as shown in **Table 1**.

**Table 1.** Curative effect results after treatment [*n* (%)]

| Group | *n* | Very effective | Effective | Not effective | Rate of effectiveness |
|---|---|---|---|---|---|
| Observation group | 83 | 49 (59.04) | 30 (36.14) | 4 (4.82) | 79 (95) |
| Control group | 83 | 43 (51.81) | 27 (32.53) | 13 (15.66) | 70 (84) |

Difference between the control group and observation group, $P < 0.05$

### 3.2. Duration of lochia and hospitalization after treatment

The volume and duration of lochia and the duration of hospitalization of the two groups after treatment are shown in **Table 2**. After treatment, the volume of lochia in the observation group was less than that in the control group; the duration of lochia in the observation group was significantly shorter than that in the control group, and the difference between the results of both groups was statistically significant ($P < 0.05$). The number of patients in the control group was significantly reduced, and the difference between the two groups was statistically significant ($P < 0.05$).

**Table 2.** Comparison of lochia duration and hospitalization time between the two groups after treatment (mean ± SD)

| Group | Number of patients | Duration of lochia (d) | Volume of lochia (mL) | Length of hospital stay (d) |
|---|---|---|---|---|
| Observation group | 83 | 5.01 ± 1.21 | 5. 89 ± 0. 67 | 8.41 ± 1.63 |
| Control group | 83 | 9.05 ± 1.46 | 12. 23 ± 0. 62 | 13.54 ± 1.69 |
| *t* | | 19.942 | 62. 120 | 19.901 |
| *P* | | 0.000 | 0.000 | 0.000 |

### 3.3. Placental excretion and abdominal pain symptoms after treatment

After treatment, B-scan ultrasonography of retained placenta and abdominal pain symptoms of the two groups were compared. The results are shown in **Table 3**. After treatment, the discharge of residual placental membrane tissue in the observation group was better than that in the comparison group, and the difference was statistically significant ($P < 0.05$); the decrease in abdominal pain in the observation group was better than that in the control group, and the difference was statistically significant ($P < 0.05$).

**Table 3.** Comparison of placental expulsion and abdominal pain symptoms in B-ultrasound reexamination after treatment [*n* (%)]

| Group | *n* | B-scan ultrasonography discharge of retained placenta | Decrease in abdominal pain |
|---|---|---|---|
| Observation group | 83 | 76 (91.6) | 79 (95.2) |
| Control group | 83 | 64 (77.1) | 72 (86.7) |
| $\chi^2$ | | 6.567 | 4.691 |
| *P* | | 0.01 | 0.03 |

## 4. Discussion

Postpartum disease refers to the disease that occurs during the puerperium. Lesions that occur during this period are mainly related to childbirth. Postpartum women have the physiological and pathological characteristics of deficiency and stasis, and are easily affected by cold and heat. Therefore, diseases that often occur during the puerperium vary, such as postpartum hemorrhage, pain due to postpartum uterine contraction, infection and fever, postpartum lochia, postpartum depression, postpartum urinary and bowel disorders, postpartum joint pain and body pains. According to the physiological and pathological characteristics of the patient, a one-week prescription was given to treat the disease and condition their bodies. One week after delivery is known as new postpartum. During this period, patients have more bleeding, which is most likely to cause consumption of yin blood and body fluid, accompanied with symptoms of yang hyperactivity. Physicians should pay attention to tonifying deficiency and clearing away heat when providing a treatment. When the bloody lochia is exhausted, the phenomenon of deficiency and cold and aversion to cold often occurs. The treatment given should be focused on warming the body and tonifying deficiency and also conditioning of the spleen and stomach. These diseases are all related to postpartum physiological characteristics, which have both “excess” and “deficient” characteristics. Therefore, in the treatment of postpartum diseases, we should pay special attention to symptom differentiation and treatment according to the physiological and pathological characteristics of patients. Fu Shan, a physician in the Ming dynasty, recorded in *Fuqingzhu Nvke* that “the main part of invigorating qi and blood is regulating the spleen and stomach.” In short, the treatment should be able to eliminate stasis and create new ones, and *Yimucao* can be added to the commonly used formula, or the original formula

Shenghua Decoction can be used. In terms of nursing care for postpartum illnesses, we must inform patients to take shelter from the wind and cold, keep warm, and prevent catching cold. The most commonly used prescriptions for postpartum syndromes are Shaofu Zhuyu Decoction, Changning Decoction, Cuiract Decoction, Shenghua Decoction, Jiawei Xiaoyao Pills, Buzhong Yiqi Decoction, and many more.

During normal vaginal delivery, when the fetus is delivered from the vagina, if the placenta cannot be completely excreted in more than 30 minutes, this condition is called retained placenta. Retained placenta and fetal membranes are the most common postpartum diseases. As the rate of delivery increases, the incidence of this disease also increases [7]. There are many reasons to the occurrence of retained placenta, which is more common among women who had multiple abortions, uterine malformation, uterine fibroids, genital infection, premature removal of the placenta by hand, or patients with abnormal first and second stages of labor [8]. Most of the postpartum placental remnants are tiny fragments of placenta that are difficult to find in the uterus. If the retained placenta is not handled properly, it can also cause other serious complications. When postpartum placenta and decidua and other tissues remain in the uterus of women, uterine contraction can be affected, and delayed discharge of lochia can cause complications such as pelvic inflammatory disease, malodorous vaginal discharge, and postpartum hemorrhage [7]. If the placental membrane and other tissues remain in the uterus for a long time, it can lead to pathological changes such as necrotic degeneration of the residual tissue in the uterus, which will lead to the detachment of small thrombus at the base of the uterine cavity, and the opening of the basal sinus, which can lead to a hemorrhage and even death [9]. Therefore, it is crucial to formulate an effective treatment for retained placenta, which will significantly improve the recovery of maternal physical and mental health.

There are many causes of retained placenta. After a delivery, the structure of the stripped placenta should be carefully observed. If there is a defect in the placenta, it is necessary to consider the possibility of retained placenta, especially if the patient has placental adhesions, uterine or uterus deformity, or history of surgery on the internal organs. Due to inadequate examination, retained placenta often goes unnoticed. Residual placenta in parturients often manifests as persistent vaginal bleeding, which may be accompanied by abdominal pain. B-scan ultrasonography can often detect retained placenta and fetal membranes in the uterus. If maternal symptoms are found to indicate retained placenta, corresponding symptomatic treatment must be given as soon as possible. At present, most of the clinical drug treatments for retained placenta involves the use of antibiotics and oxytocin to promote uterine involution and anti-inflammation. However, patients with retained placenta have poor uterine contractility and difficulty in expulsion of the retained placenta. Therefore, the effect of drug treatment is not ideal. Surgical curettage is a common an effective method in treating this condition [10]. However, uterine curettage causes great physical trauma to the parturient, especially for patients with uterine malformations. To completely remove the retained placenta, the mmagnitude of the surgery needs to be increased, thereby increasing the stimulation and damage to the endometrium and the risk of complications. In severe cases, it can also lead to uterine perforation, hemorrhage, increase the chance of hysterectomy, infertility, and put huge mental and economic pressure on the patient [11].

Chinese medicine believes that lochia refers to the septic blood and other substances that remain in the maternal uterine cavity after the fetus is delivered. Lochia is usually divided into three types; it is dark red about 3 days after delivery, and then gradually turns to light red for about a week and turns white or yellow. Lochia usually clears up within three weeks after delivery. If the bloody lochia lasts for more than 1 month and is still unclean, it is called endless lochia or persistent lochia.

Xia Guicheng, a famous doctor, believes that deficiency of qi and weak blood is the main cause of postpartum lochia. The pathogenesis is discussed from the aspects below.

(1) The essence and blood are of the same origin, and postpartum hemorrhage occurs during childbirth, resulting in a large amount of Yin fluid loss; coupled with postpartum eating a lot of hot and spicy food,

the Yin fluid consumption is more serious, leading to Yin deficiency and internal heat. For those who have postpartum depression, when they lose their temper, their liver will be irritated, and their Chongren will be heated up, thus forcing blood to go outside, resulting in postpartum lochia that cannot be cleaned.

(2) The patient is usually weak and thin, and due to the consumption of qi during childbirth, the deficiency of qi and blood, the lack of righteous qi, overworking after childbirth, improper diet, damage to the spleen and stomach, and weak spleen, the spleen cannot control the blood, which in turn causes the blood to lose qi. Blood is the mother of qi, and when qi flows, blood flows. Deficiency of blood leads to deficiency of qi, and the viscera that loses blood loses its function of nourishing the body, and the qi becomes more deficient. The function of qi is to promote blood circulation, and the deficiency of qi will cause the lack of driving force will also lead to the restriction of blood flow, resulting in qi deficiency and blood stasis. If postpartum qi and blood are weak, and cold evil invades the uterus, cold coagulation and blood stasis syndrome will occur. For example, postpartum depression, poor mood, and stagnation of liver qi will lead to stagnation of qi and blood stasis; poor hygiene in the puerperium and inflammation of the vulva and vagina will cause evil poison to invade and damage the blood collaterals, causing persistent lochia.

Western medicine believes that lochia refers to a mixture containing blood and intrauterine discharge excreted through the vagina after the delivery of the maternal fetal placenta, including a mixture of decidua, necrotic tissue, or even accompanied by a small amount of fetal membrane tissue, uterine cavity exudate, and bleeding at the site of placental attachment. Clinically, lochia is often divided into bloody lochia, serous lochia, and white lochia, with a total duration of about 6-8 weeks. Normal lochia has a slight bloody smell and no foul smell. Bloody lochia usually lasts for 3–4 days and gradually becomes serous lochia, which contains a small amount of white blood cells, erythrocytes, and necrotic decidua. Serous lochia turns into white lochia about 10 days after delivery. White lochia contains a large number of white blood cells and clears out 3 weeks after delivery. Studies have found that when there is retained placenta or fetal membrane and decidua in the uterine cavity, uterine contraction is weak and poor uterine involution occurs. In the case of residual in the intrauterine cavity combined with intrauterine infection, the amount of lochia will be prolonged, accompanied by foul smell. If there are no signs of infection, we can use uterotonic treatment to treat uterine atony, such as oxytocin, carbetocin, ergometrin, and prostaglandin preparations such as carboprost tromethamine to strengthen uterine contractions, reduce uterine bleeding, and promote uterine recovery. It has been reported that purslane has significant excitatory effects on uterine muscles. Purslane injection can replace uterine preparation and strengthen uterine smooth muscle contraction. In addition, purslane has inhibitory effect on *Shigella* and gram-positive cocci, especially for those with uterine atony and pelvic infection. We can use Hongteng Baijiang decoction to control puerperal infection of damp-heat syndrome. If the patient's postpartum lochia continues to be unclean, the possibility of trophoblastic disease must be considered. Blood HCG needs to be monitored and ensure that it returns to the normal level. Diagnostic curettage and pathological examination should be performed when necessary.

Since the implementation of the national family planning policy, the rate of induced abortion and medical abortion in women of childbearing age in early pregnancy in China has continued to rise [12], resulting in damage to the endometrium of the uterine cavity, and a corresponding increase in the number of postpartum women with retained placenta and decidua tissue, seriously endangering women's health. Retained placenta, or a small amount of fetal membrane and decidual tissue residue after delivery is still one of the main causes of late postpartum hemorrhage. If treatment is not given in time, the residue in the uterine cavity will necrose, causing infection, adhesions, and many more. This will increase the number of uterine cavity operations, difficulty of treatment, and the risk of uterine perforation and placental implantation in the subsequent pregnancy [13]. Because necrotic decidua and other tissues retained in the uterine cavity stick to the uterine wall, resulting in incomplete postpartum uterine involution, it is even

more difficult to discharge the residual tissue in the uterine cavity. Uterine atony and poor closure of small blood sinuses on the surface of the endometrium [14] will then lead to more vaginal bleeding. Dilation and curettage is an important method for treating retained placenta. However, due to the soft postpartum uterine body muscle tissue and relatively large volume of the uterine cavity, it is more difficult to scrape out the residue, and uterine during the operation, hemorrhage, intrauterine infection and perforation are prone to occur, causing severe physical and mental stress to patients [15] .

Herbal acupoint plasters is an external treatment method of traditional Chinese medicine. It refers to the method of selecting appropriate acupoints on specific meridians, applying traditional Chinese medicine on the acupoints, and stimulating the meridians acupoints to treat the disease. Herbal acupoint plasters cannot only stimulate the acupoints to take effect, but also enable the absorption of the active ingredients of the medicine through the skin, thereby exerting the pharmacological effects of traditional Chinese medicine. Therefore, it has a dual therapeutic effect. It has advantages that other treatment options do not have: on the one hand, the drug is absorbed through the skin, the dosage is small and will not be metabolized by the liver and digestive tract, thus avoiding a series of adverse reactions caused by the stimulation of the drug on the gastrointestinal tract. Therefore, this method can make up for the deficiencies of oral medicine. In addition to very few toxic drugs, herbal acupoint plasters usually has no toxic side effects and are not dangerous. It is a simple, easy to operate, safe, and economical therapy. It is especially suitable for the weak, those with nausea and vomiting, and postoperative inactive patients. Clinically, drugs such as *Carthami flos*, Pollen Typhae, *Angelica sinensis*, *Angelica dahurica*, *Salvia miltiorrhiza*, and *Asarum* are often used to promote blood circulation and remove blood stasis.

Modern doctors classify retained placenta into categories such as incomplete removal of placenta after delivery, postpartum hemorrhage, and prolonged lochia [16]. The process of childbirth consumes a huge amount of physical strength, coupled with bleeding and other factors, which severely damage the vitality of the puerpera, and the turbid blood in the uterine cavity escapes from the meridians, resulting in blood stasis [17]. Besides, traditional Chinese medicine believes that the most important pathological factors of postpartum placenta retention are qi deficiency and blood stasis, and that qi and blood are greatly injured, which lead to incessant malignant dew. Treatment in traditional Chinese medicine is based on promoting blood circulation and dredging collaterals, clearing away heat and nourishing yin. Shenghua Decoction is often used to treat postpartum lochia, and has since been used for treating retained placenta, placental adhesion and lochia [18].

During our long-term clinical practice, we have used Shenghua Zhuyu herbal acupoint plasters to treat postpartum placenta residues and reduce the rate of uterine curettage. The therapeutic effect was remarkable. Shenghua Zhuyu plasters are derived from Shenghua Decoction combined with Shaofu Zhuyu Decoction. Shenghua Decoction, as the name suggests, removes blood stasis, and then regenerates new blood, so it is called Shenghua Decoction because it has the meaning of the the source of production and development. In practice, the proportion of ingredients in the Shenghua Decoction is adjusted according to the condition of the patients. The following recipes are often used in our practice: Ligusticum wallichii, fried *Angelica sinensis*, honey-fried licorice root, peach kernel, honey-fried licorice root, fried honey-fried licorice root, *Leonurus japonicus*. The purpose of this prescription is to remove blood stasis, activate blood circulation, warm the meridian, and relieve pain. It is used to treat postpartum lochia caused by incomplete membranes, blood clots, or dripping with abdominal pain, dark purple tongue, and thready and astringent pulse. When this prescription is administered orally, the drug can promote blood circulation and remove blood stasis, so that the enlarged uterus contracts to eliminate lochia and promote uterine involution; endometrial regeneration is promoted through the removal of old blood stasis. Ligusticum and Rhizoma Corydalis dispels wind and relieves pain, activates blood circulation, and promotes qi. It reaches the head (top) and the sea of blood (bottom). These two herbs also can warm and dredge the meridians, promote blood

circulation, and remove blood stasis. *Angelica* is sweet in taste and warm in nature, it nourishes blood and activates blood circulation. The combination of Ligusticum wallichii and *Angelica sinensis*, also known as Foshou powder, can open the uterus, lower the placenta, activate blood circulation and promote qi, dissipate blood stasis, and relieve pain [19]. Peach kernels promote blood circulation and removes blood stasis, which in turn promotes uterine contraction in parturient, and have obvious anti-inflammatory and hemostatic effects. In the prescription, *Angelica sinensis* is the main drug, which plays the role of nourishing the blood and promoting blood circulation, removing blood stasis, and promoting blood regeneration; Ligusticum wallichii promotes blood circulation and qi, and when used together with *Angelica sinensis*, they can promote uterine involution, so it is also the main drug. Honey-fried licorice root harmonizes the herbs, dry ginger warms the meridians and disperses cold, and *Leonurus japonicus* and hawthorn resolves blood stasis and generate new blood. Together, the mixture of herbs form a formula to promote blood circulation, eliminate blood stasis and generate new blood.

The lower abdomen is known as *shaofu* in traditional Chinese medicine. From a gynecological point of view, the lower abdomen refers to the woman's uterus, which is the pelvic cavity. In clinical practice, we need to alter the proportion of herbs Shaofu Zhuyu Decoction to meet the needs of the patients. Shaofu Zhuyu Decoction prescription consists of the following ingredients: Rhizoma Corydalis, cinnamon, Typhae Pollen, Trogopterus Dung, dried ginger, *Angelica sinensis*, Himalayan Teasel Root, Ligusticum wallichii, *Leonurus japonicus*, *Radix Paeoniae Rubra*, fennel fruit, and many more. The prescription helps in promoting blood circulation and removing blood stasis, warming the meridians, expelling cold, and relieving pain. The veins of postnatal mothers are empty, if cold pathogens invade, cold coagulation causes blood stasis to block in the lower abdomen. When the lower abdomen is blocked, it will cause pain, which can lead to pathological diseases such as pain during postpartum uterine contraction, dysmenorrhea, and lumps. This prescription achieves the effect of warming meridians, dispersing cold, relieving pain, and removing blood stasis from the uterus and unblock the meridians of the lower abdomen. The combination of fennel fruit, dried ginger, and cinnamon helps warm the meridians and disperse the cold in the lower burner. Rhizoma Corydalis and Shixiao powder can be used together to dissipate stagnation and relieve pain, promote blood circulation, and remove blood stasis. *Angelica sinensis*, *Radix Paeoniae Rubra*, and Rhizoma Corydalis can all promote blood circulation and qi, tonify the kidney. *Leonurus japonicus* can resolve blood stasis and create new blood. The main function of the prescription is to warm the meridians and expel cold, followed by promoting blood circulation, removing blood stasis, and relieving pain, so as to treat cold coagulation and blood stasis in women.

These pharmacological effects of the aforementioned prescription have played an active and effective therapeutic role in the treatment of postpartum patients with retained placenta. The results of this study showed that the symptoms of the patients in the observation group treated with external Chinese medicine were significantly improved after treatment, and the curative effect was definite. In the observation group, the lochia and hospitalization duration was shorter, and the abdominal pain was significantly reduced. The results of B-scan ultrasonagraphy reexamination showed that the retained placenta was discharged well, and the differences between the results of the two groups were significant. This shows that the application of Shenghua Zhuyu herbal acupoint plasters has a definite curative effect on the treatment of retained placenta by stimulating the excretion of the retained placenta. Besides, it also improves the patient's physical function and symptoms, is safe, has less adverse reactions, and avoids the harm caused by uterine cavity operation or other invasive methods.

Conception vessel was first recorded in the *Huangdi Neijing*, and it is one of the eight extraordinary meridians, which is known as "sea of blood." It starts in the cell and ends at the mandible. There are three paths after the exit of the perineum, which has a total of 24 acupoints, one of which travels up in front of the body between the umbilicus. The function of the conception vessel is to regulate qi, blood, and

menstruation and is closely related to women's menstruation, leucorrhea, reproduction, and treats related diseases in the meridians. Acupoints such as Zhongji, Yuyu, and Qihai are all located at the lower abdomen, on the front midline, below the navel. 4 inches below the navel is the Zhongji, 3 inches below the navel is the Guanyuan, and 1.5 inches below the navel is the Qihai. It can treat irregular menstruation, vaginal discharge and other gynecological diseases.

Therefore, in our experiment, we selected the three acupoints above as the conception vessel acupoints, and used traditional Chinese medicine plasters to promote blood circulation, remove blood stasis, warm meridians, and stop bleeding. External treatment with traditional Chinese medicine can effectively treat patients with postpartum lochia and other diseases caused by poor uterine involution. The report of Fang et al. [20] showed that herbal acupoint plasters can significantly promote the involution of the puerpera's uterus, and has a significant effect on shortening the duration of lochia, and the method is economical and safe. In addition, Liu et al. [21] have similar reports. Shenghua Zhuyu herbal plasters were applied on acupoints for external treatment. It has the effect of nourishing blood and removing blood stasis, warming meridians, and relieving pain. Compared to oral medication, patients were found to be more compliant with this treatment no adverse reactions.

## 5. Conclusion

In conclusion, residual placenta is harmful to maternal physical and mental health, and can easily lead to postpartum hemorrhage, puerperal infection, chronic pelvic inflammatory disease, sepsis, and other complications. Surgery on the uterine cavity can lead to complications such as uterine perforation, hemorrhage, and hemorrhagic shock. External treatment methods of traditional Chinese medicine have good compliance rate, clinical operability, and are safe, and have been widely used clinically. Shenghua Decoction and Shaofu Zhuyu Decoction are classic prescriptions, and has been widely used for treating gynecology and obstetrics diseases related to blood stasis and stagnation of the uterus. However, the use of Shenghua Zhuyu herbal acupoint plasters is effective in treating retained placenta and decidua, promotes uterine involution, reduces clinical symptoms caused by uterine cavity residue, and reduces the need for surgical intervention. This method is safe and has no side effects. Besides, it can be carried out easily; it can reduce the pain of postpartum uterine contraction, shorten the time of lochia discharge, shorten the duration of hospitalization, reduce the discharge of bloody lochia, and reduce the occurrence of abnormalities in postpartum. It aids the physical and mental recovery of puerpera, hence it is worthy of further research and popularization.

## Disclosure statement

The authors declare no conflict of interest.

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