Female Infertility & Reproductive Gynaecology

A Comprehensive Clinical Manual of Integrated Chinese Medicine and Biomedicine

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Endometriosis and adenomyosis

Endometriosis is a disorder in which the endometrium, the interior lining of the uterus, is found in locations outside the uterine cavity, causing inflammation, adhesions and cysts. Endometriosis can disrupt the anatomic, hormonal and immunologic environment, causing a variety of clinical symptoms and signs such as pelvic pain, dysmenorrhoea, abdominal masses, ovarian cysts and infertility. While vaginal-recto-abdominal examination is important for early detection, only a laparoscopy can confirm the presence of endometriosis, although ultrasound can detect the presence of ovarian cysts (endometrial or 'chocolate' cysts).

The causes of endometriosis are not fully understood, although it is thought that retrograde menstruation may play a part (where menstrual blood flows back along the fallopian tubes into the pelvic cavity rather than being expelled through the vagina), as well as alterations in immune response that may prevent the adequate removal of menstrual debris.

Adenomyosis is characterised by the abnormal presence of endometrial tissue within the myometrium – in contrast to endometriosis where endometrial tissue is found entirely outside the uterus. The two conditions are often encountered together although they can occur independently.

Patients with adenomyosis often present with severe dysmenorrhoea and menorrhagia. Other possible symptoms are dyspareunia, chronic pelvic pain and irritation of the rectum and urinary bladder.

Biomedical treatment for both endometriosis and adenomyosis includes restoration of normal anatomy, removal of endometrial implants, removal of the uterus in adenomyosis, and prevention or delay of disease recurrence with medications that suppress hormonal activity such as the contraceptive pill. These objectives are rarely achieved or maintained long-term, however, and endometriosis has a high recurrence rate. The biomedical treatment of women of reproductive age with endometriosis/adenomyosis who wish to have children poses a particular challenge to the clinician. Repeated laparoscopies may lead to scarring of the reproductive tissues, while suppression of the menstrual cycle in such cases is not an option.

Chinese medicine has an important role to play in the treatment of endometriosis, adenomyosis and infertility as it can relieve symptoms, improve the chances of conception and slow the recurrence of the disease.

Chinese medicine

The traditional Chinese medicine disease categories applied to endometriosis and adenomyosis include *tong jing* (painful periods), *zheng jia* (abdominal masses), *bu yun* (infertility) or *jing xing fa re* (low fever during the period). The periodic bleeding of ectopic endometriosis is known as *li jing zhi xue* (blood has already left the channel) or *si xue* (dead blood, i.e. blood no longer governed by the body's qi).

Si xue obstructs the *Chong* and *Ren mai*, the *bao luo* and the uterus itself. Masses formed by such dead blood (endometrial implants, chocolate cysts and adhesions around endometrial tissue outside the uterus) obstruct the channels and press on local tissues causing pain and preventing conception.

The symptoms of adenomyosis and deep-infiltrated endometriosis are likely to be much more severe than those of endometriosis. If patients present with a diagnosis of endometriosis and report excruciating cyclical pelvic

pain that does not respond to oral treatment, practitioners should consider the possibility of adenomyosis. Treatment usually requires strong animal/insect substances to address severe blood stasis, and successful clinical management may require a combination of acupuncture, internal medicine and herbal enemas.

Prognosis

Endometriosis and adenomyosis are hormone-dependent diseases. As long as ovarian function is present, they are unfortunately impossible to cure. The aim of treatment is rather to reduce symptoms, control masses and promote pregnancy.

Chinese medicine is extremely effective at treating the symptoms of these diseases - the dysmenorrhoea, chronic pelvic pain, excessively heavy menses, spotting before and/or after the period and secondary anaemia. It can also reduce or disperse tender nodules, endometrioma or chocolate cysts. It is very effective at helping with the physical and mental distress caused by pain and infertility and at improving the quality of life of patients. In the treatment of infertility, Chinese medicine can successfully promote pregnancy in cases of mild to moderate endometriosis and adenomyosis, and even for those with extensive, severe endometriosis.

As long as the fallopian tubes are not blocked, pregnancy can be achieved with the help of Chinese medicine even where there are serious pelvic adhesions. For those patients suffering from adenomyosis, Chinese medicine treatment may preserve the uterus or delay a hysterectomy since it can effectively treat severe pain, heavy bleeding and infertility.

Even if a patient has become asymptomatic, it is valuable to continue to prescribe Chinese medicine treatment for ten days a month to regulate yin, yang, qi and blood in order to prevent recurrence of symptoms (generally indicated by a return of pain). This is especially important for those cases with higher levels of the tumour marker CA125, which may indicate the presence of endometriosis in a patient who has not yet had a laparoscopy.[1]

If there is a need for more intensive treatment, Chinese medicine can be combined with oral contraceptives. Alternatively, the two can be alternated every three to six months to prevent recurrence of the patient's symptoms.

Aetiology and pathogenesis

Stress

Stress and unresolved emotions such as anger and frustration or any long-held emotion impair the smooth flow of Liver qi. Liver qi stagnation can lead to blood stasis which then impairs the function of the *Chong* and *Ren mai*.

Overwork, ageing and constitution

Overwork, advancing age or innate weakness can cause deficiency of Kidney qi which then disrupts the movement of qi and blood in the lower jiao. Empty heat arising from Kidney yin deficiency can condense the blood and cause blood stasis, while cold from Kidney yang deficiency can congeal the blood. In both instances, the blood stasis is outside the normal channel system and does not respond to the body's qi.

Where a pre-existing or constitutional qi deficiency is aggravated by long term illness, blood loss, or even over-consumption of strong blood invigorating medicinals, the movement of qi becomes so weak that it cannot invigorate blood. Blood accumulates and pain results.

Pathogenic factors - cold and heat

Internal or external cold can slow down the movement of qi and lead to blood stasis. External cold can invade the uterus directly through the abdominal wall due to inadequate clothing in cold weather or exposure to cold during the period (for example swimming in cold water). Alternatively, excessive intake of cold or raw foods before or during the period can aggravate a pre-existing Spleen yang deficiency, leading to internal cold that subsequently creates blood stasis.[2]

Internal heat can be caused by the effect of emotional stress on the Liver, resulting in Liver qi stagnation transforming into heat, or from excessive intake of hot and spicy foods. If this heat transmits to the blood it can condense it and create stasis, obstructing the normal flow of qi and blood and forcing blood to accumulate outside the channel system.

Differentiation of patterns

Endometriosis and adenomyosis can be differentiated into five main patterns in clinical practice - three excess and two mixed patterns of excess and deficiency. For adenomyosis there is an extra pattern, reflecting the severity of the condition, where blood stasis combines with phlegm to create an adenomyoma within the uterine wall.

Excess

Stagnation of qi and blood
Blood stasis due to cold
Blood stasis due to heat
Combined stagnation of phlegm and blood (adenomyosis)

Mixed

Blood stasis due to qi deficiency
Kidney deficiency and blood stasis

Stagnation of qi and blood

This pattern is commonly seen in the clinic. There can be severe abdominal pain throughout the cycle that is stabbing in nature and aggravated by pressure. The pain increases at midcycle as well as before and during the period. The menstrual blood is dark and clotted, with pain relieved after passing clots. The pain may be felt premenstrually on both sides of the abdomen or in fixed locations below the umbilicus. The cycle can be irregular and the period prolonged, but the blood generally flows hesitantly or less profusely at the start. The patient often manifests or complains of depression and irritability. Premenstrually there may be breast pain and/or breast and abdominal distention. There may be abdominal masses or a bulky uterus diagnosed by laparoscopy, ultrasound or palpation.
Tongue: dark or with dark spots.
Pulse: wiry, choppy.

Treatment principle

Regulate qi, invigorate blood and dispel blood stasis to soften masses.

Prescription

Modified Hua Yu Tong Luo Fang (化瘀通络方, Prescription to Eliminate Blood Stasis and Open the Collaterals, Dr. Wu's own formula)

Dang Gui (Angelicae sinensis Radix) 10g
Chuan Xiong (Chuanxiong Rhizoma) 6g
Chi Shao (Paeoniae Radix rubra) 10g
Tao Ren (Persicae Semen) 10g
San Leng (Sparganii Rhizoma) 10g
E Zhu (Curcumae Rhizoma) 10g
Lu Lu Tong (Liquidambaris Fructus) 10g
Chai Hu (Bupleuri Radix) 6g
Huang Qi (Astragali Radix) 10-15g

For adenomyosis

Tu Bie Chong (Eupolyphaga/Steleophaga) 6-10g* and Sheng Mu Li (fresh Ostreae Concha) 30g, cook first, are added to the prescription.

Explanation

This formula is a modified version of Dr. Wu's formula for tubal obstruction. Here the prescription dispels blood stasis and dredges the collaterals to remove the 'dead blood' which is obstructing qi and thus causing pain. When the collaterals are open, qi and blood will flow freely, pain will stop (通则不痛, 不通则痛, *tong ce bu tong, bu tong ze tong* - 'if there is no free flow, there is pain; if there is free flow, there is no pain'), and masses such as chocolate cysts will be dissolved or reduced in size. Sweet-warm Dang Gui, pungent-warm Chuan Xiong and bitter-pungent-cool Chi Shao nourish and invigorate blood. Chi Shao is substituted for Bai Shao to avoid the restraining action of the latter on blood flow. Pungent-neutral Tao Ren, bitter-pungent-neutral San Leng and bitter-pungent-warm E Zhu strongly invigorate blood. Tao Ren can be used where there is concurrent constipation but should be removed if there are loose stools. Lu Lu Tong is added for its ability to open the channels, move the qi and reach the dead blood. Pungent-cool Chai Hu regulates Liver qi and disperses stagnation. Sweet-warm Huang Qi is added to support the *zheng* qi which is typically depleted by the chronic nature of the disease, and to help tonify qi to invigorate blood.

For adenomyosis, strong blood breaker Tu Bie Chong and salty-cool astringent Mu Li are added for their capacity

** Current Chinese Medicine hospital practice is that doses of Tu Bie Chong over 3g need signatures from two doctors before dispensing.*

to soften hardness and thus deal with masses within the uterine muscle. Mu Li's astringency also counterbalances the strong blood movers in the prescription to prevent a shortened cycle.

This formula is only used after the period and is not given when there is bleeding during the cycle. A separate formula is used to control pain and bleeding during menstruation - please see below for a discussion on treating during the period.

Modifications

- A long cycle is always easier to treat than a very short one. This formula simultaneously nourishes and invigorates blood so that masses are reduced and delayed periods will come more regularly and with less pain. A very long cycle (≥35 days), however, needs additional modifications, with sweet-bitter-neutral Chuan Niu Xi (Cyathulae Radix) 10-15g and pungent-bitter-cool Yi Mu Cao (Leonuri Herba) 10-15g added for their descending and blood invigorating properties.
- If the long cycle is accompanied by signs of yin deficiency, caution should be exercised in the use of the pungent-warm herbs. Salty-cool Bie Jia (Tryonycis Carapax) 15-20g, decocted before the other ingredients are added, is especially appropriate in such cases since it nourishes yin, invigorates blood and softens lumps.
- Short cycles are often caused by heat generated by stagnant qi. Here it is vital to control the length of the cycle since more frequent periods mean that endometrial implants bleed more regularly and will create new masses. The formula will need to be adapted so that it still invigorates blood but also prevents early bleeding. It should be stopped at the appropriate time to allow the period to come. San Leng and E Zhu are removed since they are too moving for a pattern involving frequent bleeding. If the cycle is extremely short (21 days or fewer), Sheng Mu Li (Ostreae Concha) 20-30g can be added to cool heat, delay early bleeding and soften masses. Bitter-cold Qian Cao Tan (carbonised Radix Rubiae Cordifoliae) 10-15g and sweet-pungent-neutral Pu Huang Tan (carbonised Pollen Typhae) 10g both invigorate blood and stop bleeding. Powdered sweet-warm San Qi (Notoginseng Radix), 2 x 1.5g/day taken separately in warm water can be used, despite the heat, because of its ability to invigorate blood, stop bleeding and reduce masses.
- If distention is more pronounced than pain throughout the cycle, *Jin Ling Zi San* [Melia Toosendan Powder comprising Yan Hu Suo (Corydalis Rhizoma) 15g and Chuan Lian Zi (Toosendan Fructus) 6-9g] can be added along with Xiang Fu (Cyperi Rhizoma) 10g to control pain. If there is more pain than distention add Ru Xiang (Olibanum) 3-5g, Mo Yao (Myrrha) 3-5g and Yan Hu Suo (Corydalis Rhizoma) 15g. If the pain is felt in the breast, hypochondrium or subcostal regions, add Li Zhi He (Semen Litchi Chinensis) 10g and Qing Pi (Citri reticulatae viride Pericarpium) 6-10g to spread qi. Wang Bu Liu Xing (Vaccaraie Semen) 10g can be added to invigorate blood, but exercise caution if there is heat and a tendency to a short cycle.
- For constipation add raw Da Huang (Rhei Radix et Rhizoma) 6-10g or Zhi Shi (Aurantii Fructus immaturus) 10g to spread qi and move the stool. The dose of Tao Ren (Persicae Semen) may also be increased to 15g.
- If there are diagnosed masses such as chocolate cysts or palpable nodules, the dosage of blood invigorating herbs may need to be increased.
- Generally speaking, non-period formulas should be stopped two to three days before the onset of bleeding. For cases with severe dysmenorrhoea, or very heavy and/or prolonged bleeding, a specialised period formula needs to be prescribed and is best started three days before the onset of the period. Please see below for a discussion on treating during the period.

Acupuncture

Acupuncture treatment is focused on regulating qi and blood and alleviating pain. Treatment should be at least weekly and may need to be twice weekly around the time of the period. Treatment is generally more effective if acupuncture is combined with herbal medicine, in which case it can be confined to times of greater pain and/or at midcycle in order to promote ovulation (especially if the patient is trying to conceive). Reducing needle technique is recommended, with even/reinforcing method for points that nourish Liver blood. Moxibustion can be helpful to reduce pain, but should be used cautiously if excess heat has been generated by qi stagnation.

- To regulate qi and alleviate pain: Taichong LIV-3 combined with Hegu L.I.-4 (the 'Four Gates'), Yanglingquan GB-34, Zhongdu LIV-6, Zhangmen LIV-13, Tianshu ST-25, Qihai REN-6.
- To regulate blood and alleviate pain: Xuehai SP-10, Chongmen SP-12, Siman KID-14, Daimai GB-26, Geshu BL-17, Ganshu BL-18 Sanyinjiao SP-6, Ququan LIV-8, Shiguan KID-18, Zhongji REN-3, Shuidao ST-28, Qichong ST-30; if the patient is unable to bear needling on the abdomen consider using the sacral points Shangliao BL-31 to Xialiao BL-34.
- For acute pain: xi-cleft points Zhongdu LIV-6, Shuiquan KID-5, Jiaoxin KID-8, Diji SP-8.
- To cool blood if heat has shortened the cycle: Dadun LIV-1, Xingjian LIV-2, Ligou LIV-5, Xuehai SP-10.
- To nourish blood in order to soothe the Liver: Ququan LIV-8, Sanyinjiao SP-6, Geshu BL-17, Ganshu BL-18.
- To activate the *Chong mai* to regulate blood: Gongsun SP-4 and Neiguan P-6.

Blood stasis due to cold

There is pain throughout the cycle as well as during the period itself. The blood is dark, clotted and extremely painful. Because this is an excess cold pattern, the pain is aggravated by touch or pressure and substantially relieved by local application of warmth. The abdomen may feel cold on palpation. The patient may have received a diagnosis of an endometrial mass or masses, or endometrial spots throughout the pelvis, and may have a bulky uterus, indicative of adenomyosis. Her facial complexion may be blueish white and she will complain of cold limbs and sensitivity to or aversion to cold. There may have been a history of exposure to cold (especially during menstruation) or over-consumption of raw or cold foods (especially if consumed just before or during the period).
Tongue: dark blue tongue body with dark spots.
Pulse: deep and choppy, or deep and tight.

Treatment principle

Warm the channels and disperse cold, invigorate blood and dispel blood stasis to soften masses.

Prescription

Modified Shao Fu Zhu Yu Tang （少腹逐瘀汤, Modified Drive Out Blood Stasis in the Lower Abdomen Decoction, Correction of Errors Among Physicians, 1830）

Xiao Hui Xiang (Foeniculi Fructus) 6g
Yan Hu Suo (Corydalis Rhizoma) 10-15g
Mo Yao (Myrrha) 3-5g
Dang Gui (Angelicae sinensis Radix) 10g
Chuan Xiong (Chuanxiong Rhizoma) 6g
Chi Shao (Paeoniae Radix rubra) 10g
Gui Zhi (Cinnamomi Ramulus) 6-10g
E Zhu (Curcumae Rhizoma) 10g
Ru Xiang (Olibanum) 3-5g

For adenomyosis

Shui Zhi (Hirudo seu Whitmaniae) 3-6g

Explanation

This modified version of the classic formula *Shao Fu Zhu Yu Tang* nourishes and invigorates blood, warms the *Chong mai*, dispels cold and alleviates pain. Gan Jiang (Zingiberis Rhizoma), Wu Ling Zhi (Trogopterori Faeces) and Pu Huang (Typhae Pollen) have been removed and replaced by E Zhu and Ru Xiang. These herbs are stronger in their action of invigorating blood and relieving pain. Ru Xiang and Mo Yao are a classic combination for pain but should only be used in low doses in order to prevent nausea. Rou Gui (Cinnamomi Cortex) has been replaced by sweet-pungent Gui Zhi, which warms yang and moves through the channels to reach the dead blood. These substitutions limit the number of herbs in the formula and maintain its economy of action. Pungent-cool Chi Shao cools, nourishes and invigorates blood and counterbalances the warmer substances in the formula. For adenomyosis, salty-bitter-neutral Shui Zhi (Hirudo) 3-6g is added because of its capacity to break up severe blood stasis without damaging the patient's qi.

Modifications

- If the patient reports that menstrual bleeding is scanty as well as dark, clotted and painful, neutral descending Ze Lan (Herba Lycopi Lucidi) 10-15g or warm-bitter-aromatic Liu Ji Nu (Artemisiae anomalae Herba) 10g

should be added to invigorate blood so as to promote a healthy period. It is also possible in this instance to use the original unmodified prescription during the period with the addition of Gan Jiang (Zingiberis Rhizoma) 6g and Wu Ling Zhi (Trogopterori Faeces) 10g to warm blood and relieve pain.

- If menstrual bleeding is prolonged (>7 days) a post-menstrual formula must be adapted to include warm herbs which invigorate blood and stop bleeding, since prolonged bleeding will increase endometriotic lesions. E Zhu, Ru Xiang, Mo Yao and even milder Chuang Xiong should be removed since they will aggravate extended bleeding. Sweet-warm powdered San Qi (Notoginseng Radix) powder 2 x 1.5g/day, taken separately with warm water, bitter-pungent-warm Ai Ye Tan (carbonised Artemisiae argyi Folium) 10g or pungent-hot Pao Jiang Tan can be added, and Pu Huang (Typhae Pollen) changed to Pu Huang Tan (Carbonised Typhae Pollen) 10g. Salty-warm astringent Hai Piao Xiao (Sepia Endoconcha) 20g can be used if bleeding is very difficult to stop. Once bleeding has ceased, treatment aimed at invigorating blood can be resumed.
- If there are endometrial cysts, add warm Cang Zhu (Atractylodis Rhizoma) 6-10g, neutral Tu Fu Ling (Smilacis glabrae Rhizoma) 20-30g, or Dong Gua Pi (Exocarpium Benincasea) 20-30g.
- If nausea and vomiting accompany the pain, or the digestion is weak, remove Ru Xiang and Mo Yao and add Wu Zhu Yu (Evodiae Fructus) 3g to warm the channels and subdue rebellious qi, or Jiang Ban Xia (ginger prepared Pinelliae ternatae Rhizoma) 6-10g.
- If lower back and knee coldness and soreness indicate an associated Kidney yang deficiency, add pungent-sweet-warm Yin Yang Huo (Epimedii Herba) 10g and bitter-pungent-hot Bu Gu Zhi (Psoraleae Fructus) 10g (contraindicated if the patient is trying to get pregnant), and/or change warm Gui Zhi to hot Rou Gui (Cinnamomi Cortex) 3g.
- If there is diarrhoea add Rou Dou Kou (Myristicae Semen) 6g. Bu Gu Zhi (Psoraleae Fructus) 10g can also be added to warm the channels and treat loose stools but should be stopped if the patient is actively trying to conceive. Alternatively, Chao Bai Zhu (dry-fried Atractylodis macrocephalae Rhizoma) 10g can be prescribed to warm and strengthen the Spleen and treat chronic loose stools.
- If there is chest oppression accompanied by a white, greasy tongue coating (confirming concurrent dampness), one or two of the following pungent-bitter-warm herbs can be added, Chen Pi (Citri reticulatae Pericarpium) 6g, Cang Zhu (Atractylodis Rhizoma) 6-10g or Hou Po (Magnoliae Officinalis) 6-10g.
- If the patient complains of an uncomfortable bearing-down sensation in the lower abdomen, add sweet-warm Zhi Huang Qi (honey-prepared Astragali Radix) 10-15g, sweet-warm Dang Shen (Codonopsis Radix) 10-15g or pungent-cool Chai Hu (Bupleuri Radix) 6g.
- If there is weak digestion, reduce the dosage of Ru Xiang and Mo Yao and add bitter-warm Liu Ji Nu (Artemisiae anomalae Herba) 10g and bitter-pungent-warm Jiang Huang (Rhizoma Curcumae) 10g to break up blood stasis and eliminate pain. Liu Ji Nu awakens and strengthens the Spleen, stimulates appetite and promotes digestion in addition to invigorating blood.
- Once the patient's symptoms have improved and they want to conceive, please see below for a discussion on promoting fertility in endometriosis patients.

Acupuncture

Acupuncture treatment is focused on regulating qi and warming/invigorating the blood. Treatment should be at least weekly if just using acupuncture, and may need to be twice weekly around the time of the period. However, it is more effective to combine acupuncture with herbal medicine, in which case the acupuncture can be confined to times of greater pain and/or at midcycle in order to promote ovulation if the patient is trying to conceive. Needle technique is reducing on points to expel cold and move the blood, and reinforcing on points to tonify Kidney yang. Use of a moxibustion box, moxibustion stick and/or warming needle is very important.

- To expel cold and warm/move the blood: Sanyinjiao SP-6, Ligou LIV-5, Diji SP-8, Xuehai SP-10, Siman KID-14, Guilai ST-29, Qichong ST-30, Zhongji REN-3, Shimen REN-5; if the patient is unable to bear needling on the abdomen consider using the sacral points Shangliao BL-31 to Xialiao BL-34.
- To tonify and warm Kidney yang and expel cold: Taixi

KID-3, Fuliu KID-7, Guanyuan REN-4, Qihai REN-6, Mingmen DU-4, Shenshu BL-23.
- To activate the *Chong mai* to regulate blood: Gongsun SP-4 and Neiguan P-6.

Blood stasis due to heat

The pain is intense and stabbing, possibly burning, and aggravated by touch and pressure. It both precedes and continues through the period and may be constant or intermittent throughout the cycle. Bleeding will be heavy, bright red, possibly containing large clots, with pain relieved as the clots pass. Since pathogenic heat shortens the cycle, periods are more frequent, aggravating the condition because of increased internal bleeding causing further pathological accumulation of blood and pain. Premenstrually there may outbursts of anger, headaches, insomnia and restlessness. These symptoms will be worsened by stress, alcohol or spicy foods. There will be systemic signs of heat such as thirst, irritability, restlessness, insomnia or restless sleep, constipation, dark and scanty urine, and a flushed face or red complexion.
Tongue: reddish purple with a yellow tongue coating.
Pulse: rapid and forceful.

Treatment principle

Clear heat and invigorate blood, dispel blood stasis to soften masses.

Prescription

Modified Qing Re Tong Luo Fang (清热通络方, Clear Heat and Dredge the Collaterals Formula, Dr. Wu's own formula)

Bai Jiang Cao (Herba cum Radice Patriniae) 20g
Pu Gong Ying (Taraxaci Herba) 15g
Lian Qiao (Forsythiae Fructus) 15g
Ren Dong Teng (Sargentodoxae Caulis) 20g
Dan Shen (Salviae miltiorrhizae Radix) 15g
Chi Shao (Paeoniae Radix rubra) 10g
Hong Teng (Sargentodoxae Caulis) 20g
San Leng (Sparganii Rhizoma) 10g
Lu Lu Tong (Liquidambaris Fructus) 10g
Xia Ku Cao (Prunellae Spica) 12g

For adenomyosis

Tu Bie Chong (Eupolyphaga/Steleophaga) 6-10g*
Sheng Mu Li (uncooked Ostreae Concha) 30g cook first
Hai Zao (Sargassum) 10g or Bei Mu (Fritillariae Bulbus) 10g

Explanation

This formula was originally devised to treat tubal blockage. In this pattern internal heat has coagulated blood and obstructed qi, causing abdominal masses accompanied by severe pain due to internal bleeding and adhesions. The formula clears the heat that is coagulating the blood, alleviates pain by invigorating blood, breaks up masses and opens the *Chong mai*. Many of the herbs in this formula are from the fire poison category and in biomedical terms have an anti-inflammatory action. Pungent-bitter-cool Bai Jiang Cao and neutral Hong Teng clear heat and invigorate blood to alleviate pain, while sweet-cold Ren Dong Teng clears heat, cools blood and dredges the collaterals to reduce masses and alleviate pain. Bitter-pungent-cold Xia Ku Cao and bitter-mild-cold Lian Qiao are used for their ability to break up lumps. Bitter-mild-cold Dan Shen and bitter-mild-cold Chi Shao cool and invigorate blood. Bitter-pungent-neutral San Leng moves qi and blood and breaks up blood stasis. Both sweet-bitter-cold Pu Gong Ying and bitter-neutral Lu Lu Tong soften nodules and have diuretic properties to clear heat via urination, while Lu Lu Tong invigorates blood through all the channels and dispels dead blood. It is important to note that a different formula must be prescribed two to three days before the period since bitter-cold herbs such as Xia Ku Cao and Pu Gong Ying will cause more blood stasis if administered during the period (a time when a woman is especially vulnerable to internal cold), while excessively strong blood invigorating may cause heavy bleeding. Please see below for a discussion on *Treating during the period*.

For adenomyosis, Sheng Mu Li (fresh Ostreae Concha) 30g and the strong blood-breaker Tu Bie Chong (Eupolyphaga/Steleophaga) 6-10g* are added. As in the first pattern, Sheng Mu Li counterbalances the strong blood invigorating substances to prevent shortening of the

* *Current Chinese Medicine hospital practice is that doses of Tu Bie Chong over 3g need signatures from two doctors before dispensing.*

cycle. Hai Zao (Sargassum) 10g and/or Bei Mu (Fritillariae Bulbus) 10g are also added to further soften masses.

Modifications

- For severe chronic or intermittent pelvic pain (at times other than during the period) add *Jin Ling Zi San* (Melia Toosendan Powder) comprising Yan Hu Suo (Corydalis Rhizoma) 15g and Chuan Lian Zi (Semen Nelumbinis Nuciferae) 6-9g to move qi and blood and relieve pain. Neutral pungent Xiang Fu (Cyperi Rhizoma) 10g can also be added for intense pain.
- If the cycle is very short (21 days or fewer) due to heat, add Mu Li (Ostreae Concha) 20-30g. If it is 22 days or more, add bitter-cold Huang Qin (Scutellariae Radix) 10-15g, sweet-cold Sheng Di Huang (Rehmanniae Radix) 10-15g and sweet-cold Di Gu Pi (Lycii Cortex) 10-15g to cool blood and regulate the cycle. However, Huang Qin must not be taken within three days of the next period. Moving herbs such as San Leng and Lu Lu Tong may also have to be removed until the length of the cycle is stable.
- If menstrual bleeding persists beyond seven days it is important to stop the bleeding. San Leng and Lu Lu Tong are removed and replaced by herbs to invigorate blood and stop bleeding such as bitter-cold Qian Cao Gen (Radix Rubiae Cordifoliae) 10g or Qian Cao Tan (Carbonised Radix Rubiae Cordifoliae) 10-15g, and sweet-neutral Pu Huang Tan (carbonised Pollen Typhae) 10g. Pungent-cool Chai Hu (Bupleuri Radix) 6g can also be added to raise qi, vent heat and assist in stopping bleeding.
- If prolonged bleeding is bright red and heavy, remove Dan Shen, Lu Lu Tong and San Leng, change Chi Shao to Bai Shao (Paeoniae Radix alba), and add bitter-cold Huang Qin (Scutellariae Radix) 10-15g, sweet-cold Sheng Di Huang (Rehmanniae Radix) 10-15g, bitter-cool Ce Bai Tan (carbonised Platycladi Cacumen) 10-15g, and Sheng Mu Li (fresh Ostreae Concha) 30g. When bleeding has stopped revert to the original formula.
- For low fever before or during the period add sweet-cold Di Gu Pi (Lycii Cortex) 10-15g or bitter-cold Qing Hao (Artemisiae annuae Herba) 10g (added at the end of cooking). Bitter-pungent-cool Mu Dan Pi (Moutan Cortex) 6-12g is also particularly appropriate since it clears heat and cools the blood.
- If there has been a long-term history of illness or if there is concurrent deficiency add sweet-warm Sheng Huang Qi (raw Astragali Radix) 10-15g.
- If heat has consumed body fluids add sweet-cool Yu Zhu (Polygonati odorati Rhizoma) 12g or sweet-cold Bei Sha Shen (Glehniae Radix) 10-15g.
- For premenstrual irritability and bitter taste caused by Liver heat, add bitter-cold Zhi Zi (Gardeniae Fructus) 6-9g, bitter-pungent-cool Mu Dan Pi (Moutan Cortex) 6-12g and bitter-pungent-cold Yu Jin (Curcumae Radix) 6-12g, but remove bitter-cold herbs three days before the period is due.
- For constipation add bitter-cold Da Huang (Rhei Radix et Rhizoma) 6-10g (added at the end of cooking), bitter-pungent cool Zhi Shi (Aurantii Fructus immaturus) 6-10g or bitter-cool Zhi Qiao (Aurantii Fructus) 10g, and/or pungent-neutral Tao Ren (Persicae Semen) 10g. Caution may be needed with downward moving purgative herbs if the cycle is extremely short (see short cycle modifications above).
- For yellow vaginal discharge add bitter-cold astringent Chun Gen Pi (Cortex Ailanthi) 10g or Huang Bai (Phellodendri Cortex) 6-12g.
- For endometrial cysts, add sweet-cold, downward-draining Che Qian Zi (Plantaginis Semen) 10g, sweet-bland-neutral Tu Fu Ling (Smilacis Glabrae) 15-20g or bitter-cold Qu Mai (Dianthi Herba) 10g, but exercise caution with downward-draining herbs if there is a tendency to a short cycle.
- A specialised period formula also needs to be prescribed to be started three days before its onset. Please see below for a discussion on treating during the period.
- Once the patient has improved and wants to conceive please see below for a discussion on promoting fertility.

Acupuncture

Acupuncture treatment is focused on regulating qi and blood, clearing heat, cooling blood and alleviating pain. Treatment should be at least weekly if using acupuncture alone, and may need to be twice weekly around the time of the period. However, treatment is more effective if acupuncture is combined with herbal medicine, in which

case the acupuncture can be confined to times of greater pain and/or at midcycle in order to promote ovulation if the patient is trying to conceive (see the clinical notes at the end of this section for more on the different stages of treatment). Reducing needle technique is recommended, with even/reinforcing technique for points that nourish yin and blood.

- To clear heat and cool blood: Dadun LIV-1 (bleed), Xingjian LIV-2, Ligou LIV-5, Ququan LIV-8, Xuehai SP-10, Quchi L.I.-11, Weizhong BL-40, Yingu KID-10.
- To regulate qi and blood and alleviate pain: Four Gates (Taichong LIV-3 and Hegu L.I.-4), Yanglingquan GB-34, Shuidao ST-28, Qichong ST-30, Xuehai SP-10, Siman KID-14, Daimai GB-26, Geshu BL-17, Ganshu BL-18, Sanyinjiao SP-6, Zhongji REN-3; if the patient is unable to bear needling on the abdomen consider using the sacral points Shangliao BL-31 to Xialiao BL-34.
- For acute pain or to stop bleeding: xi-cleft points Zhongdu LIV-6, Shuiquan KID-5, Jiaoxin KID-8, Diji SP-8.
- To nourish yin and blood to soothe the Liver: Ququan LIV-8, Sanyinjiao SP-6, Taixi KID-3, Zhaohai KID-6, Geshu BL-17, Ganshu BL-18, Guanyuan REN-4.
- To stabilise the *Chong* and *Ren mai*: Dahe KID-12, Qixue KID-13, Zhongji REN-3, Yinjiao REN-7.

Combined stagnation of phlegm and blood

This pattern, mostly seen in cases of adenomyosis, is characterised by chronic pain throughout the cycle that becomes excruciating before and during the period due to bleeding into the muscle of the uterus. The bleeding can be hesitant at the start, becoming very heavy, sticky and clotted. Tenacious nodules may be felt posterior to the uterus and palpation causes severe pain. Ultrasound may show masses without clear borders in the uterine wall. The patient may complain of heavy, sticky vaginal discharge, chest oppression and show systemic signs of phlegm such as a tendency to be overweight, poor digestion and tiredness.
Tongue: dark with a greasy tongue coating.
Pulse: wiry and slippery.

Treatment principle
Transform phlegm and invigorate blood, soften masses.

Prescription
Modified Hai Zao Yu Hu Tang (海藻玉壺汤, Sargassum Decoction for the Jade Flask, Orthodox Lineage of External Medicine, 1617)

Hai Zao (Sargassum) 10-15g
Kun Bu (Eckloniae Thallus) 10-15g
Zhe Bei Mu (Fritillariae Bulbus) 10g
Zhi Ban Xia (Pinelliae ternatae Rhizoma) 6-10g
Chen Pi (Citri reticulatae Pericarpium) 6-10g
Lian Qiao (Forsythiae Fructus) 15g
Chuan Xiong (Chuanxiong Rhizoma) 6g
Dang Gui (Angelicae sinensis Radix) 10g
San Leng (Sparganii Rhizoma) 10g
E Zhu (Curcumae Rhizoma) 10g
Zao Jiao Ci (Gleditsiae Spina) 10-15g

Explanation
This is a modification of the classic formula *Hai Zao Yu Hu Tang* which transforms phlegm, regulates qi and softens masses. Since this pattern is one of combined phlegm and blood stasis, it is modified to combine the original ingredients, sweet-warm Dang Gui and pungent-warm Chuan Xiong, with stronger blood breakers - pungent-warm E Zhu and pungent-neutral San Leng. Pungent-warm phlegm transforming and blood invigorating Zao Jiao Ci works with salty-cold Hai Zao, Kun Bu and bitter-cold Zhe Bei Mu to soften a combined blood and phlegm mass. Bitter-warm Chen Pi dries damp, transforms phlegm and regulates qi to assist with the digestion of the other herbs. Bitter-mild-cold Lian Qiao has been retained since it clears the heat that can arise from stagnation while also helping to break down masses.

Modifications

- For sensitivity to cold, a pale dark-hued tongue and a white greasy coating, remove cold Hai Zao and Kun Bu and replace with pungent-warm Bai Jie Zi (Sinapsis Semen) 6-10g to warm and transform cold phlegm, or use pungent sweet Gui Zhi (Cinnamomi Ramulus) 6-10g to warm the channels, invigorate blood and - by warming yang - promote diuresis and drain dampness.
- If the patient has a dark red tongue with a yellow greasy coating, indicating phlegm, blood

stasis and heat, there will likely be symptoms of restlessness and irritability. However, the patient will also often complain of feeling cold, reflecting a complex condition of 'true heat, false cold'. Clearing heat in such cases will paradoxically improve poor circulation and sensitivity to cold. In this case, remove pungent warm Ban Xia and substitute sweet-bitter-cold Gua Lou (Trichosanthis Fructus) 15-20g or bitter-cold Fu Shi (Pumice) 10g.

- For severe dysmenorrhoea, or very heavy and/or prolonged bleeding, a period formula needs to be started three days before the onset of the period. Please see below for a discussion on treating during the period.
- Once the patient has improved and wants to conceive please see below for a discussion on promoting fertility.

Acupuncture

Acupuncture treatment is focused on transforming phlegm, invigorating qi and blood, tonifying Spleen qi and alleviating pain. Treatment should be at least weekly and may need to be twice weekly around the time of the period. Treatment is generally more effective if acupuncture is combined with herbal medicine, in which case it can be confined to times of greater pain and/or at midcycle in order to promote ovulation (especially if the patient is trying to conceive). Needle technique is reducing on points to transform phlegm-damp, spread qi and and invigorate blood and reinforcing on points to tonify Spleen qi. Moxibustion is applicable, especially where there is Spleen yang deficiency.

- To transform phlegm-damp: Sanyinjiao SP-6, Yinlingquan SP-9, Zusanli ST-36, Fenglong ST-40, Zhongwan REN-12, Tianshu ST-25, Shuidao ST-28, Zhongji REN-3, Shuifen REN-9, Pishu BL-20, Sanjiaoshu BL-22.
- To spread qi, invigorate blood and alleviate pain: Four Gates (Taichong LIV-3 and Hegu L.I.-4), Yanglingquan GB-34, Shuidao ST-28, Qichong ST-30, Diji SP-8, Xuehai SP-10, Siman KID-14, Daimai GB-26, Geshu BL-17, Ganshu BL-18, Sanyinjiao SP-6, Zhongji REN-3; if the patient is unable to bear needling on the abdomen consider using the sacral points Shangliao BL-31 to Xialiao BL-34.
- For acute pain: xi-cleft points Zhongdu LIV-6, Shuiquan KID-5, Jiaoxin KID-8, Diji SP-8.
- To activate the *Chong mai* to regulate blood: Gongsun SP-4 and Neiguan P-6.

Blood stasis due to qi deficiency

In this pattern the menstrual bleeding is often heavy and accompanied by abdominal and possibly rectal pain. The bleeding is thin and pink and may be watery. The pain tends to have a bearing down quality and is substantially relieved by rest, pressure and warmth. The patient will complain of long-term exhaustion and extreme tiredness. She may report that laparoscopy aggravated her pain rather than relieved it. There may also be poor digestion, loose stools, shortness of breath on exertion and frequent urination.
Tongue: dark, swollen with teethmarks and a thin white coating.
Pulse: weak and thin.

Treatment principle

Tonify qi and raise yang, invigorate blood and dispel blood stasis to soften masses.

Prescription

Modified Bu Yang Huan Wu Tang (补阳还五汤, Tonify the Yang to Restore Five-tenths Decoction, Corrections of Errors Among Physicians, 1830)

Zhi Huang Qi (honey-prepared Astragali Radix) 20-30g
Dang Gui Wei (Extremitas Radix Angelicae Sinensis) 10g
Chi Shao (Paeoniae Radix rubra) 10g
Chuan Xiong (Chuanxiong Rhizoma) 6g
Di Long (Pheretima) 10g
Tao Ren (Persicae Semen) 10g
Hong Hua (Carthami Flos) 10g
Dang Shen (Codonopsis Radix) 15g
E Zhu (Curcumae Rhizoma) 10g

For adenomyosis add

San Leng (Sparganii Rhizoma) 10g
Mu Li (Ostreae Concha) 30g cook first
Chai Hu (Bupleuri Radix) 6g

Explanation

This is a mixed pattern of excess and deficiency where the qi is so deficient that it is unable to move the blood which then accumulates outside the normal channel system and causes pain. This formula is adapted from *Bu Yang Huan Wu Tang*, the classic prescription designed to tonify qi, invigorate blood and open the channels, with the addition of sweet-neutral Dang Shen and pungent-warm E Zhu. The large dose of sweet-warm Huang Qi tonifies qi to help dispel blood stasis. Huang Qi and Dang Gui combine to form *Dang Gui Bu Xue Tang* (Tangkuei Decoction to Tonify the Blood). Sweet-pungent-warm Dang Gui Wei nourishes and moves blood, with the tail of the herb chosen for a stronger moving action. Combined with pungent-cool Chi Shao and pungent-warm Chuan Xiong, these herbs both nourish and invigorate blood to alleviate pain. Sweet-neutral Dang Shen is added as an assistant to tonify qi. Since this is a condition marked by chronic and severe blood stasis, stronger herbs are also necessary. Pungent-neutral Tao Ren and pungent-warm Hong Hua combine to invigorate blood, while E Zhu moves qi and blood to break up stasis, soften masses and alleviate pain. Salty-cold Di Long is used for its ability to dredge the channels and collaterals. Stronger blood breaking pungent-neutral San Leng and salty-cool astringent (Ostreae Concha) are added to soften an adenomyoma or large areas of adenomyosis. Qi regulating and ascending Chai Hu (Bupleuri Radix) is added to raise the qi.

Modifications

- If menstrual bleeding persists longer than seven days, the stronger moving herbs E Zhu and Di Long, and even Chuan Xiong, should be removed from the formula and replaced by herbs which both invigorate blood and stop bleeding. Warm powdered San Qi (Notoginseng Radix) powder 2 x 1.5g/day, can be taken separately with warm water, (4 x 1.5g/day if bleeding is extremely heavy). Pu Huang Tan (Carbonised Typhae Pollen) 10g, warm astringent Ai Ye Tan (Artemisiae argyi Folium) 10g or Hai Piao Xiao (Os Sepiae seu Sepiellae) 20g can also be added to stop bleeding. Adding Chai Hu (Bupleuri Radix) 6g, if not already used, will raise qi to stop bleeding.
- For loose stools add bitter-sweet-warm Bai Zhu (Atractylodis macrocephalae Rhizoma) 10-15g, bland-neutral Fu Ling (Poria) 10-15g and sweet-neutral Bai Bian Dou (Lablab Semen album) 10-20g to strengthen the Spleen.
- If there is a bearing-down sensation in the rectum, uterus and/or vagina, add sweet-cool Sheng Ma (Cimicifugae Rhizoma) 6g and pungent-cool Chai Hu (Bupleuri Radix) 6g (if not already used) to raise qi, and bitter-cool Zhi Qiao (Aurantii Fructus) 6g to contract the uterine muscles.
- For pain throughout the cycle add bitter-sweet-pungent-neutral Xiang Fu (Cyperi Rhizoma) 10-15g, pungent-bitter-warm Cu Yan Hu Suo (vinegar prepared Corydalis Rhizoma) 10-15g, and/or pungent-warm Wu Yao (Linderae Radix) 3-9g.
- For severe dysmenorrhoea, or very heavy or prolonged bleeding, a specialised period formula needs to be prescribed, to be started three days before the onset of the period. Please see below for a discussion on treating during the period.
- Once the patient has improved and wants to conceive, please see below for a discussion on promoting fertility in endometriosis patients.

Acupuncture

Acupuncture treatment is focused on tonifying and raising qi, nourishing and invigorating blood and alleviating pain. Treatment should be at least weekly if using acupuncture alone and may need to be twice weekly around the time of the period. Treatment is usually more effective if acupuncture is combined with herbal medicine, in which case the acupuncture can be confined to times of greater pain and/or at midcycle in order to promote ovulation if the patient is trying to conceive. Needle technique for this pattern will depend on the pulse. If it is weak, even needle technique should be used instead of reducing method since strong reducing action would further disperse the deficient qi. Warming needle and moxibustion are recommended, since the heat will not only tonify the qi but also help invigorate blood.

- To tonify qi and blood: Zusanli ST-36, Taibai SP-3, Sanyinjiao SP-6, Guanyuan REN-4, Qihai REN-6, Zhongwan REN-12, Geshu BL-17, Ganshu BL-18, Pishu BL-20.
- To raise qi: Baihui DU-20.

- To invigorate blood and alleviate pain: Taichong LIV-3 and Hegu L.I.-4 (the 'Four Gates'), Xuehai SP-10, Siman KID-14, Shuidao ST-28, Qichong ST-30.
- For acute pain or to stop bleeding: xi-cleft points Zhongdu LIV-6, Shuiquan KID-5, Jiaoxin KID-8, Diji SP-8.
- To stabilise the *Chong* and *Ren mai*: Dahe KID-12, Qixue KID-13, Zhongji REN-3, Yinjiao REN-7.

Kidney deficiency and blood stasis

This mixed excess and deficiency pattern is the one most commonly seen in patients attending infertility clinics. Both during and after the period there is abdominal pain with a bearing down quality which can radiate to the sacral and lumbar area, as well as rectal pain during the period. There may be a previous history of miscarriage. The patient may complain of dizziness, a weak back and ongoing back and/or knee pain. If Kidney yin deficiency is primary, there may be signs of empty heat such as a short cycle and fresh red menstrual blood with small clots. If the patient is primarily Kidney yang deficient, the bleeding will be pale and light, and she may experience sensitivity to cold, frequent urination and low libido. If *jing* is deficient, the cycle may be irregular. The complexion will have a dark hue, especially around the eyes and mouth, indicating deficiency mixed with stagnation.
Tongue: tender, pale with a dark blue hue and a thin white coating (Kidney yang deficiency), or tender, dark red with a scanty coating (Kidney yin deficiency).
Pulse: deep, thin and weak, especially in both proximal positions. In cases of Kidney yin deficiency with empty heat, the pulse may be thin and rapid.

Treatment principle

Invigorate blood, dispel blood stasis and strengthen the Kidney to regulate the period.

Prescription

Modified Yi Shen San Yu Fang (益肾散瘀方, Nourish the Kidney and Dispel Blood Stasis Prescription, Dr. Wu's own formula)

Tu Si Zi (Cuscutae Semen) 15g
Shan Zhu Yu (Corni Fructus) 10g
Xu Duan (Dipsaci Radix) 15g
Gou Qi Zi (Lycii Fructus) 15g
Dang Gui (Angelicae sinensis Radix) 10g
Dan Shen (Salviae miltiorrhizae Radix) 15g
San Leng (Sparganii Rhizoma) 10g
Tao Ren (Persicae Semen) 6-10g
Xiang Fu (Cyperi Rhizoma) 10g

For yang deficiency

Add warm Yin Yang Huo (Epimedii Herba) 6-15g, warm *jing* nourishing Lu Jiao Jiao (Cervi Cornu Colla) 3-6g or Lu Jiao Pian (sliced Cornu Cervi) 6-15g (both melted into the decoction), or pungent-hot blood invigorating Rou Gui (Cinnamomi Cortex) 3g to tonify Kidney yang, warm the uterine collaterals (*bao luo*) and the uterus (*bao gong*) and invigorate blood.

For yin deficiency

Add *Er Zhi Wan* (Two Solstice Pill) comprising bitter-sweet-neutral Nu Zhen Zi (Ligustri lucidi Fructus) 15-20g and sweet-sour-cold Han Lian Cao (Ecliptae Herba) 10-15g, or salty-cool Bie Jia (Tryonycis Carapax) 15-20g.

For adenomyosis add

E Zhu (Curcumae Rhizoma) 6-10g
Mu Li (Ostreae Concha) 30g and/or Bie Jia (Tryonycis Carapax) 15-20g cook first.

Explanation

Since this is a mixed pattern of deficiency and excess, the formula combines Kidney tonifying herbs with herbs that invigorate blood and break up blood stasis. Sweet-neutral Tu Si Zi, sweet-sour-warm Shan Zhu Yu and sweet-neutral Gou Qi Zi combine to nourish Kidney yin and yang. Bitter-pungent-mild-warm Xu Duan tonifies Kidney yang and also invigorates blood. Sweet-pungent-warm Dang Gui nourishes and invigorates blood while bitter-mild-cold Dan Shen, neutral Tao Ren and bitter-pungent neutral San Leng are particularly effective as a group, especially where there is combined heat and blood stasis. Pungent-neutral Xiang Fu regulates qi and thus helps with pain. For adenomyosis, to further soften hard masses, pungent-warm blood invigorating E Zhu (Curcumae Rhizoma) is added, along with salty-cool astringent Sheng Mu Li (Ostreae Concha) 30g and salty-cool Bie Jia (Tryonycis Carapax) 15-20g.

Modifications

- For dizziness and tinnitus, add mild-warm Shu Di Huang (Rehmanniae Radix preparata) 10g or warm Sha Yuan Zi (Astragali complanati Semen) 10-15g if there is yang deficiency, or cold Sang Shen Zi (Fructus Mori Albae) 10-15g if there is yin deficiency.
- If empty heat has shortened the cycle, add sweet-cold Sheng Di Huang (Rehmanniae Radix) 10-15g, sweet-salty-cold Gui Ban (Plastrum Testudinis) 9-25g and sweet-cool Han Lian Cao (Ecliptae Herba) 10-15g to nourish yin, clear empty heat and stop bleeding. In addition, bitter-pungent-cold Qian Cao Tan (Carbonised Radix Rubiae Cordifoliae) 10-15g stops bleeding while invigorating blood and can be used to lengthen the cycle.
- If, however, there is still a short cycle (or a prolonged period), despite treatment to reduce empty heat, reduce the dosage of San Leng, E Zhu and Tao Ren, since relatively large doses of strong blood movers will further shorten the cycle or aggravate prolonged bleeding. Add salty-cool astringent Sheng Mu Li (Ostreae Concha) 30g, powdered warm San Qi (Notoginseng Radix) 2 x 1.5g/day, taken separately with warm water, bitter-cold Qian Cao Tan (carbonised Radix Rubiae Cordifoliae) 10-15g and neutral Pu Huang Tan (carbonised Pollen Typhae) 10-15g. These additions will mean that bleeding is controlled while the underlying blood stasis is treated.
- If Kidney yang deficiency results in a long cycle with scanty bleeding, add sweet-warm Du Zhong (Eucommiae Cortex) 10-15g, pungent-warm Chuan Xiong (Chuanxiong Rhizoma) 6g and sweet-warm Ji Xue Teng (Spatholobi Caulis) 10-15g.
- For intermittent or constant abdominal pain throughout the cycle, add pungent-bitter-warm Cu Yan Hu Suo (vinegar treated Corydalis Rhizoma) 12-15g and bitter-pungent-cold Chuan Lian Zi (Toosendan Fructus) 6-9g (which constitute *Jin Ling Zi San)*, and bitter-sweet-pungent-neutral Xiang Fu (Cyperi Rhizoma) 10g. For pain with a distinct cold sensation use pungent-hot Rou Gui (Cinnamomi Cortex) 3-6g and/or pungent-warm Wu Yao (Linderae Radix) 3-6g to warm Kidney yang and resolve pain due to cold.
- If there is pain radiating to the lumbar and sacral regions add sweet-warm Du Zhong (Eucommiae Cortex) 10g and bitter-sweet-neutral Sang Ji Sheng (Taxilli Herba) 10-15g, the latter herb gently moving qi and blood in the channels and strengthening the Kidney. Bitter-sour-neutral Huai Niu Xi (Achyranthis bidentatae Radix) 10-15g can also be added to strengthen the Kidney and Liver and invigorate blood, provided there is no tendency to early periods. Pungent-hot Rou Gui (Cinnamomi Cortex) 3-6g can be added to warm Kidney yang, warm the channels and resolve pain due to cold.
- For large chocolate cysts or nodules, add E Zhu (Curcumae Rhizoma) 10g.
- For cases with severe dysmenorrhoea or very heavy or prolonged bleeding, a period formula should be started three days before the onset of the period. Please see below for a discussion on treating during the period.
- Once the patient has improved and wants to conceive, please see below for a discussion on promoting fertility in endometriosis patients.

Acupuncture

Acupuncture is focused on tonifying the Kidney while nourishing and invigorating blood and alleviating pain. Treatment should be at least weekly and may need to be twice weekly around the time of the period. Treatment is generally more effective if acupuncture is combined with herbal medicine, in which case it can be confined to times of greater pain and/or at midcycle in order to promote ovulation (especially if the patient is trying to conceive). Needle technique for this pattern will depend on the pulse. If it is very weak, even needle technique should be used instead of reducing method on points to invigorate blood, since strong dispersing will further disperse the deficient qi. If there is Kidney yin deficiency, treatment is focused on nourishing Kidney yin and clearing empty heat while nourishing and invigorating blood. If there is Kidney yang deficiency, treatment is focused on tonifying Kidney yang while warming and invigorating blood.

- To tonify the Kidney: Taixi KID-3, Zhaohai KID-6, Fuliu KID-7, Yingu KID-10, Dahe KID-12, Qixue KID-13, Zhongji REN-3, Guanyuan REN-4, Qihai REN-6, Shenshu BL-23, Mingmen DU-4.

- To nourish and invigorate blood: Sanyinjiao SP-6, Zusanli ST-36, Xuehai SP-10, Geshu BL-17, Ganshu BL-18.
- To regulate qi and blood and alleviate pain: Four Gates (Taichong LIV-3 and Hegu L.I.-4), Yanglingquan GB-34, Shuidao ST-28, Qichong ST-30, Diji SP-8, Xuehai SP-10, Siman KID-14, Daimai GB-26, Geshu BL-17, Ganshu BL-18, Sanyinjiao SP-6, Zhongji REN-3; if the patient is unable to bear needling on the abdomen consider using the sacral points Shangliao BL-31 to Xialiao BL-34.
- To activate the *Chong mai* to regulate blood: Gongsun SP-4 and Neiguan P-6.

Treating during the period

In severe endometriosis and adenomyosis, a period prescription may be started three days before the period to render treatment more effective, and the patient should agree not to try to get pregnant during this time because of the blood invigorating properties of the formula. To facilitate this, the practitioner should negotiate a realistic time frame with the patient, for example two to three months, to allow for the treatment to take effect.

Period formula for severe dysmenorrhoea

This prescription is started three days before and continued throughout the period. It fulfils the treatment principle of nourishing and invigorating blood, regulating qi, alleviating pain and controlling excessive bleeding. For a more detailed explanation of this formula see Chapter 4: Regulating the Period.

Combined modified Tiao Jing Fang (调经方, Regulate the Menses Formula, Dr. Wu's own formula) + *Jin Ling Zi San* （金铃子散, Melia Toosendan Powder, Formulary of the Pharmacy Service for Benefiting the People in the Taiping Era, 1107)

Dang Gui (Angelicae sinensis Radix) 10g
Chao Bai Shao (dry-fried Paeoniae Radix alba) 10-15g
Xiang Fu (Cyperi Rhizoma) 10g
Pu Huang (Pollen Typhae) 10g
Wu Ling Zhi (Trogopterori Faeces) 10g
Yan Hu Suo (Corydalis Rhizoma) 10-15g
Chuan Lian Zi (Toosendan Fructus) 6-9g
Yi Mu Cao (Leonuri Herba) 10g
Zhi Gan Cao (Honey fried Glycyrrhizae Radix) 6g

Explanation

Pungent-sweet-warm Dang Gui nourishes and invigorates blood while sour astringent dry-fried Bai Shao nourishes and astringes blood. Chao Bai Shao also helps to prevent the loose stools that can sometimes happen during the period. Bitter-sweet-pungent-neutral Xiang Fu regulates qi to alleviate pain. Sweet-neutral Pu Huang and sweet-warm Wu Ling Zhi alleviate pain, invigorate blood and control bleeding. Pungent-warm Yan Hu Suo and bitter-cold Chuan Lian Zi regulate qi and invigorate blood to treat pain. Bai Shao and Zhi Gan Cao together treat the cramping that is so often a source of discomfort. Gan Cao also helps to harmonise the herbs in the prescription.

Modifications

- If pain is more pronounced than distention, add pungent-warm Jiang Xiang (Dalbergiae odoriferae Lignum) 10-15g and sweet-salty-neutral Xue Jie (Daemonoropis Resina) 2 x 1.5d/day taken separately with warm water to dispel blood stasis, alleviate pain and stop bleeding. If distention is more more pronounced than pain, add pungent-warm Wu Yao (Linderae Radix) 10g and warm Li Zhi He (Semen Litchi Chinensis) 10g.
- For severe pain with nausea and vomiting, add pungent-hot Wu Zhu Yu (Evodiae Fructus) 2-3g and pungent-aromatic-warm Sha Ren (Amomi Fructus) 3g (added to the decoction for the last three to five minutes only).
- For scanty menses, add bitter-pungent-slightly warm Ze Lan (Herba Lycopi Lucidi) 10g, pungent-warm Chuan Xiong (Chuanxiong Rhizoma) 6g, or bitter-mild-cold Dan Shen (Salviae miltiorrhizae Radix) 15g to promote free flow of blood.
- If after one to two months of treatment there is still severe pain, add powdered *Chen Hu Jie San* (沉胡竭散, Aquilariae, Corydalis and Draconis Powder, Dr. Wu's own formula) to the period or non-period formula [equal amounts of bitter-pungent-aromatic-warm Chen Xiang (Aquilariae Lignum

resinatum), pungent-bitter-warm Yan Hu Suo (Corydalis Rhizoma) and sweet-salty-neutral Xue Jie (Draconis Sanguis)] in doses of 2-3g each time, three to four times a day. If the pain is due to cold impeding the blood, add a similar amount of Rou Gui (Cinnamomi Cortex) to *Chen Hu Jie San*. If there is excessive bleeding, add powdered San Qi (Notoginseng Radix) 2-4 x 1.5d/day.

- For heavy periods due to qi deficiency or cold, change Pu Huang to Chao Pu Huang (dry-fried Pollen Typhae) 10-15g and add warm San Qi (Notoginseng Radix) 2 x 1.5g/day, the latter being applicable in all cases of heavy bleeding; its dosage can be increased to 1.5g every four hours if necessary.
- For heavy periods due to blood heat, reduce or remove blood invigorating Dang Gui and add pungent-cool Chai Hu (Bupleuri Radix) 6g to help raise qi, with either cold Qian Cao Gen (Radix Rubiae Cordifoliae) 6-10g, cold Qian Cao Tan (carbonised Radix Rubiae Cordifoliae) 6-10g, or neutral Ou Jie (Nelumbinis Nodus rhizomatis) 15-20g.
- For heavy periods due to yin deficiency and heat, add sweet-bitter-cold Sheng Di Huang (Rehmanniae Radix) 6-10g and sweet-sour-cold Han Lian Cao (Ecliptae Herba) 10-12g.
- For heavy periods with blood deficiency, add sweet-neutral E Jiao (Asini Corii Colla) 6-9g (melted into the decoction).
- If bleeding continues beyond seven days, follow the treatment guidelines given in the individual patterns earlier in the chapter. Further guidance can be found in Chapter 10: Prolonged menstruation (blood stasis pattern).
- Retention enemas can be prescribed for use either post period or throughout the cycle to relieve pain. See external treatments below.

Promoting fertility

Endometriosis and adenomyosis are progressive diseases with symptoms that often worsen as time passes. Pregnancy is the most important 'therapy' in combating endometriosis, and Chinese medicine is the best medicine to use at the outset to try to achieve this. A pregnancy will help delay a recurrence of the disease since the increased progesterone prevents the action of oestrogen on endometrial tissues which have implanted in the pelvis. If the fallopian tubes are patent (even if swollen, twisted or with endometrial cysts), the patient can be helped to become pregnant. This is a completely different therapeutic principle to that of biomedicine, which treats endometriosis through inhibiting reproductive function, even to the point of inducing menopause with gonadotrophin releasing hormone agonist (GnRH-a) medications. By contrast, Chinese medicine regulates the balance of yin, yang, qi to control endometriosis, while promoting ovulation and pregnancy, with fewer side effects than biomedicine.

There are other distinct advantages to using Chinese medicine to treat infertility complicated by endometriosis. Hormonal suppression often means a delay in trying to conceive. This is not ideal since patients often present with other issues that prevent pregnancy such as non- or oligo-ovulation, luteal phase deficiency (LPD) or luteinised unruptured follicle syndrome (LUFS). Skilful Chinese medicine treatment can incorporate treatment strategies for such obstructions to conception while treating the endometriosis. Further information can be found in the relevant chapters of this book.

Treatment is carried out according to the stages of the cycle. A preparation stage using strong blood invigoration is used for two to three months, followed by a strategy that promotes pregnancy whilst simultaneously treating endometriosis.

Preparation stage

It is very important to understand that the practitioner should not try to promote Kidney yang during this stage but concentrate on dealing with the endometriosis, and the patient must agree to avoid becoming pregnant until told that it is safe to do so.

This stage usually lasts 2-3 months, or until symptoms have improved. The aim is to control the endometriosis, reduce any masses or chocolate cysts, regulate the cycle and the period and prepare the patient for the next stage of treatment. In addition to acupuncture and herbs, the practitioner should

gather essential information (reproductive hormone levels, thyroid function, BBT charts, ovulation detection etc.).

There are only two phases of the cycle considered here: non-period and period. During the non-period phase, treatment follows the differential diagnosis as laid out in the chapter above. During the period, the treatment principle is to regulate and invigorate blood to prevent pain, excessive bleeding and clotting. This promotes proper shedding of the endometrium and initiates an improved uterine lining. *Modified Tiao Jing Fang* (Regulate the Menses Formula) is used for this purpose (see above as well as Chapter 4: Regulating the Period).

Promoting pregnancy stage

The severity of the symptoms of endometriosis or adenomyosis should have reduced and the practitioner can now place the emphasis on promoting a pregnancy. Treatment varies according to the three phases of the menstrual cycle: the follicular/ovulatory phase, the luteal phase and the menstrual phase. The aim is to promote healthy ovulation and a good luteal phase to support a pregnancy, whilst simultaneously controlling the endometriosis. During the follicular/ovulatory phase, the practitioner can safely treat the blood stasis by following the principle of dispelling blood stasis and pelvic masses, whilst simultaneously promoting follicular development and ovulation. This is achieved by combining herbs to tonify the Kidney and nourish Liver blood with those which invigorate blood and soften masses (see Chapter 3. Core strategies for treating female infertility).

During the luteal phase, three to four days after the BBT demonstrates a good thermal shift, the practitioner should change to a luteal phase formula, for example *Yi Shen Gu Chong Fang* (Replenish the Kidney and Consolidate the Chong Formula, see Chapter 20: Luteal phase defect) and use acupuncture points which support Kidney and Spleen qi and consolidate the *Chong* and *Ren mai* in order to promote implantation and secure a pregnancy. Strong blood movers are taken out of the prescription at this stage.

During the menstrual phase the treatment principle, as always, is to nourish and invigorate blood so as to prevent pain, excessive bleeding and clotting. *Modified Tiao Jing Fang* is used (see above and Chapter 4: Regulating the Period).

Clinical notes

- Patients wishing to conceive often consult Chinese medicine practitioners after a laparoscopy, seeking the opportunity to become pregnant naturally. This can be an optimum time to use Chinese medicine to avoid having to resort to ART. Treatment should be started the month after surgery since pregnancy rates are much higher then.
- If a patient receiving Chinese medicine has not had a laparoscopy, and pregnancy is not achieved after two to four months of good ovulation, a laparoscopy should be suggested. This is not only to rule out tubal obstruction, but also to deal with such issues as peritoneal fluid and higher levels of prostaglandins and some cytokines that may lead to infertility, endometrial foci and/or adhesions. A hysterosalpingogram (HSG) is not the best choice for suspected endometriosis and may delay pregnancy.
- For patients who do not need IVF/ICSI, it is best not to use GnRH-a drugs such as Lupron post laparoscopy, since there is no data to indicate their benefits for natural gestations.[3] Besides, since restoration of ovarian function is often delayed after stopping GnRH-a, this can further delay the chances of natural conception.[4]
- If after two to four months of Chinese medicine treatment to promote pregnancy there is evidence of non- or oligo- ovulation, biomedical treatment may be necessary, for example with clomiphene or letrozole. If ultrasound reveals an excessively thin endometrium Progynova can be given, and if there is LUFS (luteinised unruptured follicle syndrome), an HCG injection can be used to help promote the expulsion of the egg from the follicle during ovulation. In such cases, Chinese medicine can help reduce side effects and increase the effectiveness of treatment.

When chocolate cysts recur after oophorocystectomy (surgical removal of ovarian cyst), Chinese medicine is the best treatment option since it can promote pregnancy at the same time as dealing with the cysts. This is preferable to repeating surgery which may lead to diminished ovarian function.

- It has been noted in China that young patients experience diminished ovarian reserve and even premature ovarian failure after repeated cystectomy for chocolate cysts. Recently, the impact of benign cystectomy has attracted extensive attention. Alborzi et al discovered that 65 per cent-80 per cent of the capsule wall of endometrial cysts contains ovarian tissue.[5] Post cystectomy with laparoscopy or laparotomy, follicles are lost since endometrial cysts adhere closely to ovarian tissue, thus significantly reducing fertility. Thus it is better for women who are trying to conceive but suffer recurrent endometrial cysts to try Chinese medical treatment first. Such treatment can control the cysts (shrinking those that are not larger than 7mm), soften scar tissue and adhesions, treat dysmenorrhoea, promote ovulation and the function of the corpus luteum, and treat associated LUFS, all of which will increase the chances of successful pregnancy. After conception and birth, these cysts will reduce in size or disappear. If the mean diameter of chocolate cysts is greater than 7mm, Chinese medicine combined with the puncturing of such cysts directed by transvaginal ultrasound (TVU) may be a better choice than repeated surgery.
- If there are large tumours or nodules, animal substances such as salty-bitter-neutral Shui Zhi (Hirudo) 3-6g, salty-cold Tu Bie Chong (Eupolyphaga/Steleophaga) 6-10g, or bitter-mild-cold, mildly toxic Meng Chong (Tabanus) 1.5-3g can be used to strongly activate the collaterals and eliminate masses. They are more active and strong in breaking up blood stasis than plant medicines. However due to their mild toxicity, it is necessary to alternate them every two to four weeks.
- For patients with pelvic masses, it is best to regularly check tumour markers as well as the size and nature of the mass by ultrasound in order to rule out other diseases.

* *Current Chinese Medicine hospital practice is that doses of Tu Bie Chong over 3g need signatures from two doctors before dispensing.*

External treatments for endometriosis and adenomyosis

Since both endometriosis and adenomyosis are very stubborn conditions and since strong herbal prescriptions can be hard on the digestion, external treatments can be a useful addition.

Hot compress

The boiled herbs used to make the decoction are mixed with yellow wine (*huangjiu*) to help them penetrate the skin. They are then wrapped in cotton or cheese cloth and steamed until hot. After the period has finished this is placed on the abdomen once or twice a day and covered with a towel, for a total of 10-15 days in the cycle. If they are too hot, a further towel can be used between the wrapped herbs and the skin. They should be retained for 20-30 minutes each time, and a hot water bottle can be placed on top of the compress to keep it warm.

Retention enema

Retention enemas are condensed decoctions inserted via the rectum. Enemas are stronger than decoctions or powders taken orally and have the advantage that they are rapidly absorbed into the blood stream where they can directly affect the diseased area. They also have the advantage that they can include hard-to-digest substances such as Tu Bie Chong (Eupolyphaga/Steleophaga), Mo Yao (Myrrha) and Ru Xiang (Olibanum) at higher doses and without side effects such as nausea that can sometimes accompany oral consumption. Retention enemas are normally used alongside oral decoctions. A commonly used prescription for daily use is:

Dang Gui (Angelicae sinensis Radix) 10g
E Zhu (Curcumae Rhizoma) 10g
Ru Xiang (Olibanum) 6g
Tu Bie Chong (Eupolyphaga/Steleophaga) 10g
Gui Zhi (Cinnamomi Ramulus) 10g
Zao Jiao Ci (Gleditsiae Spina) 15g
Hai Zao (Sargassum) 10g
Lian Qiao (Forsythiae Fructus) 15g
Mu Li (Ostreae Concha) 30g cook first

Procedure

The herbs are soaked for 60 minutes and cooked with enough water to cover them by about 3cm. Total liquid is then reduced by cooking to around 250-300ml. This is then used once or twice a day, using half the liquid each time. In order to save cooking time, two bags can be cooked together and the liquid kept in the fridge to be warmed before use. The patient should pass urine and ideally empty their bowels before proceeding.

The decoction is taken from the fridge and warmed. The temperature of the enema should be about 38°C (or comfortable to an elbow dipped into it). A 12 or 14 gauge urine catheter is fed either from a drip bag or from a 100ml syringe. The catheter must be inserted 16 to 18 centimetres into the rectum. Liquid is either fed in from the drip bag or pushed in by the syringe. This must be done slowly since the enema is designed to be retained overnight and, if done too quickly, the patient may not be able to retain the liquid. If a drip bag is used, it should not be hung too high so that the liquid goes in slowly and is more easily retained. Once the enema has been inserted, the catheter is removed.

Retention enemas are best administered before bed to be absorbed overnight.

Herbal pastes

Plasters made from powdered herbs can be applied to the abdomen. The raw herbs are ground to a fine powder, mixed with warm water or vaseline to make a paste and put on top of the navel or lower abdomen. They can then be covered with a cloth fixed in place with adhesive plasters. A commonly used prescription is:

Tian Nan Xing (Arisaematis Rhizoma) 10g
Tao Ren (Persicae Semen) 10g
Hai Zao (Sargassum) 10g
E Zhu (Curcumae Rhizoma) 15g
Ru Xiang (Olibanum) 6g
Mo Yao (Myrrha) 6g
Xia Ku Cao (Prunellae Spica) 10g

Other treatments

Current treatment in Chinese medicine hospitals for moderate to severe endometriosis includes oral decoctions, intravenous injection of Chuan Xiong (Chuanxiong Rhizoma) or Dan Shen (Salviae miltiorrhizae Radix), rectal retention enemas, vaginal or rectal suppositories, herbal injections into acupuncture points and iontophoresis - administration of decoctions through the skin with a small electric current.

Biomedicine by Dr. Michael Haeberle

Endometriosis is a pathological condition in which the tissue that lines the inside of the uterus is found in other locations around the body. Endometriotic lesions can be found anywhere in the pelvic cavity - the ovaries, fallopian tubes and pelvic sidewall, the uterosacral ligaments, the cul-de-sac, the Pouch of Douglas and the rectal-vaginal septum. They are less commonly found on the bladder, bowel, appendix and rectum. In even more rare cases, endometriosis has been found inside the vagina, inside the bladder, on the skin and even in the lung, spine and brain.[6 7 8 9 10 11] An area of endometriosis that is large enough to be described as a tumour is called an endometrioma.[12] Endometriomas typically occur as cystic lesions on the ovary (commonly known as 'chocolate cysts').

The prevalence of endometriosis in the general population has been difficult to determine, yet it is thought to occur in about 25 per cent of women with pelvic pain and 20 per cent of women with infertility.[13] Endometriosis is a disease of women of reproductive age, 90.4 per cent occurring between 15 and 55 years,[14] although endometriosis in premenarchal girls and postmenopausal women has been reported.[15 16]

Aetiology and pathogenesis

Several causes have been suggested for endometriosis, however none of them fully explains the complexity of the disease. The following theories are generally accepted, although it may be a combination of several factors that leads to the development of endometriosis in susceptible women.

Retrograde menstruation

The theory of retrograde menstruation was proposed by Sampson in 1921,[17 18 19] who hypothesised that endometriosis was the result of endometrial tissue transported by retrograde menstruation to ectopic sites where it would implant and grow. These implants then become foci for further spread. However, retrograde menstruation seems to be a common phenomenon (seen in 76 to 90 per cent of women),[20 21 22 23] which suggests that

there are other co-factors involved in the development of endometriosis in susceptible women, such as a defective immune system. And although retrograde menstruation may explain the most frequent forms of endometriosis in the pelvis, it does not account for the unusual finding of implants in the pelvic lymph nodes or other sites such as the lung, nose, vertebral spaces, extremities, kidney and umbilicus. The distribution of endometrial cells through the lymphatic and vascular systems has been suggested as an explanation.[24 25 26 27 28]

Metaplasia

Another possible mechanism for the development of endometriosis is that healthy cells outside the uterus can transform into endometrial cells and thus become sites of endometrial activity. This is based on the theory that many tissues in the pelvic area derive from the same embryologic tissue and maintain their capacity to change.[29]

Immunologic factors

Alterations in immune response (such as decreased natural killer [NK] cell and T-lymphocyte activity, increased circulating auto-antibodies and increased numbers of peritoneal macrophages) may prevent adequate disposal of the menstrual debris caused by retrograde menstruation, possibly increasing the chances of the development of endometriosis.[30] The nature and degree of immune impairment could account for the variable presentation of endometriosis.[31] Alternatively, excessive menstrual reflux may overwhelm the capacity of a normally-functioning immune system to remove endometrial tissue or suppress its growth. Increased concentrations of transforming growth factor-b (TGF-b), IL-1, tumour necrosis factor-a (TNF-a) and vascular endothelial growth factor[32] have been reported in the peritoneal fluid of women with endometriosis.[33 34 35]

Pathology

Endometriotic implants may vary considerably in appearance. The gross appearance of endometriotic implants has typically been described as bluish grey, dark brown or black 'powder burn' lesions. Smaller fresh lesions may be found as clusters of nodules resembling haemorrhagic vesicles, which have been described as 'raspberry' spots. Different types of implants may coexist within the same patient. Endometriotic cysts are often found in the ovary. After a cyst forms, cyclic haemorrhage within the cyst adds to its contents, causing cyst growth. These endometriomas have been described as chocolate cysts because of the thick, tarry, dark-brown fluid composed of blood and blood pigment that fills them. As intracystic pressure increases, the tendency for endometriomas to perforate also increases.

Clinical presentation

Endometriosis can cause a wide variety of symptoms although many affected patients are asymptomatic. The most common symptoms associated with endometriosis are pelvic pain - occurring to some degree in up to 80 per cent of patients - and infertility.[36]

Pelvic pain

Pelvic pain has many different manifestations including dysmenorrhoea, backache, rectal pressure, constant lower abdominal discomfort and severe cramps. In contrast, large endometriomas are occasionally asymptomatic. Menstrual cramps that begin and progressively worsen in previously asymptomatic women, or that differ in character and severity from other cramps, may be an indicator of endometriosis. Painful sexual intercourse (dyspareunia) is also a common symptom. This is usually associated with implants involving the uterosacral ligament, rectovaginal septum, upper vagina or posterior cul-de-sac and is usually exacerbated during menstruation.

Infertility

Infertility is frequently the only presenting symptom in patients with endometriosis, although the incidence is unknown. However we do know that the incidence of endometriosis in infertile women ranges from 4.5 per cent to 33 per cent.[37]

Other symptoms

Other symptoms are usually attributable to endometriosis in specific sites. Bowel implants can cause rectal bleeding or obstruction. Endometriosis in the bladder can cause suprapubic pain, frequent, urgent and painful urination and/or haematuria. Ureteral involvement may cause upper urinary tract symptoms such as flank

pain or backache. Pulmonary involvement can result in pleuritic pain, pleural effusion, cough, haemoptysis or pneumothorax.[38] In patients with upper abdominal or shoulder pain, diaphragmatic endometriosis should be considered.[39] Cyclic headaches or seizures may indicate brain lesions.[40] Sciatica has been reported from endometriosis in the retroperitoneal space.[41]

Diagnosis

Clinical suspicion of endometriosis is usually a product of the history and physical examination. Confirmation of endometriosis, however, requires direct visualisation. Laparoscopy is the gold standard for diagnosis, whilst ultrasound examination is primarily used to detect endometriomas in the ovary.

Classification

Endometriosis is classified into stages according to its severity of spread and adhesion.[42] [43]

- Stage I (minimal): The presence of superficial lesions and possibly a few filmy adhesions.
- Stage II (mild): In addition to the above, some deep lesions are present in the cul-de-sac.
- Stage III (moderate): As above, plus the presence of endometriomas on the ovary and other adhesions.
- Stage IV (severe): As above, plus large endometriomas, extensive adhesions and infiltration of other organs (bladder, intestine, ureter etc.).

Treatment

Diverse therapeutic approaches have been used to address the clinical symptoms of endometriosis, including no treatment, medical treatment, surgical treatment and a combination of medical and surgical treatment.

Medical treatment

Medical treatment consists of hormonal therapy that most commonly includes a combination of oral contraceptives, high-dose progestins, danazol and GnRH agonists or aromatase inhibitors. These medications interrupt the cycle of stimulation and bleeding of ectopic endometrial tissue and induce atrophy of the implants, decreasing pain and the inflammatory response that may cause fibrosis and adhesions. Uncontrolled trials have shown an improvement in pain symptoms in approximately 80 to 90 per cent of patients receiving high dose progestin, danazol, gestrinone or GnRH agonists.[44] [45] [46] [47] A recurrence rate of up to approximately 50 per cent per year has been reported.[48]

Surgical treatment - laparoscopy

With improvements in equipment and operative technique, laparoscopy is the most common choice for surgery. The degree of success, however, depends on the skills of the surgeon. Laparoscopic elimination of endometrial implants may be accomplished by laser ablation, electrosurgical desiccation or sharp resection. The techniques used during surgery are directed towards removing all endometrial implants in an atraumatic, haemostatic fashion and the least amount of time. In the presence of moderate or severe endometriosis, surgery is the treatment of choice for endometriosis associated infertility. Because of the ineffectiveness of medical therapy, surgery has been the approach for treating endometriomas. Complete resection of the cyst wall is preferred to minimise thermal injury to the ovary, ensure complete removal and obtain a specimen for pathologic examination. In two retrospective studies, pregnancy rates after laparoscopic treatment of endometriomas in infertility patients were 50 per cent (26 of 52 patients) and 52 per cent (12 of 23 patients).[49] [50] Severe endometriosis involving the septum rectovaginale (deep cul-de-sac) can also be treated; in one study of infertile patients with partial or complete cul-de-sac obliteration, 74 per cent (34 of 46) of patients conceived after laparoscopic treatment, with 38 per cent (13 of 34) requiring more than one laparoscopy.[51] In advanced stages of endometriosis (III and IV), surgical treatment is often followed by medical treatment to delay recurrence. Recurrence of endometriosis implants after surgery was reported in 28 per cent of patients within 18 months,[52] and 40.3 per cent after five years.[53]

Other surgery for endometriosis associated pelvic pain

Surgical treatment for endometriosis associated pelvic pain has been poorly studied in biomedicine but appears to be useful. Uncontrolled trials report success in relieving pain in 70 to 100 per cent of patients.[54] Unfortunately, a return of symptoms is experienced by at least 10 to 20

per cent of patients.[55] Definitive surgery consisting of hysterectomy and salpingo-oophorectomy is effective for relieving endometriosis-associated pain. This approach should be considered for patients who fail medical or conservative surgical treatment and can accept loss of fertility.

Surgery for the management of infertility

Surgery is usually the treatment of choice for endometriosis associated infertility, and aims to remove adhesions and restore normal anatomy. In contrast to medical treatment, a period of contraception is not required. This provides older infertility patients a time saving of up to six months (during which time fertility may decrease). In general, within two years of surgical therapy for endometriosis, a pregnancy rate of approximately 65 per cent can be expected.[56] In the largest prospective, multi-centre, double-blind, controlled, randomised study to date, surgical treatment by laparoscopy resulted in a significantly higher pregnancy rate after 36 weeks than expectant management.[57] The cumulative probability of pregnancy in surgically-treated versus non-treated subjects was 30.7 per cent and 17.7 per cent respectively. These data support the surgical approach to infertile patients with minimal or mild endometriosis.

Ovarian stimulation and IVF in endometriosis related infertility

Following an infertility evaluation, the most common treatments are controlled ovarian hyperstimulation with or without intrauterine insemination and assisted reproductive technologies (ART). These treatments are intended to increase the overall reproductive capacity and do not directly cause regression of endometriosis implants. Gonadotropin treatment appears to at least double monthly reproductive capacity (fecundity). In a controlled, randomised study of women with minimal or mild endometriosis, controlled ovarian hyperstimulation with gonadotropins resulted in a monthly fecundity rate of 15 per cent, compared with 4.5 per cent in untreated women.[58] In cases of moderate or severe endometriosis, procedures such as IVF are usually employed because of the higher probability of significant anatomic distortion that would interfere with transportation of the oocyte through the fallopian tube. When assessing outcomes according to diagnosis, patients with endometriosis were reported to have lower pregnancy rates after IVF and ICSI compared with patients with tubal factor infertility.[59] [60]

Integrating Chinese medicine and biomedicine

The side effects of the medical treatment of endometriosis are an important consideration, and for this reason Chinese medicine could be a very helpful option. Also, medical treatment is not appropriate for women trying to conceive, and in such cases Chinese medicine may be a better post-surgical option. Administration of Chinese herbal medicine may have benefits comparable to gestrinone but with fewer side effects, may have a better overall treatment effect than danazol and may also be more effective in relieving dysmenorrhoea.[61]

Adenomyosis

Adenomyosis is a characterised by the abnormal presence of endometrial tissue within the myometrium, contrasting with endometriosis where endometrial tissue is present entirely outside the uterus. The two conditions can be found together but often occur independently.[62] The condition is typically found in women between the ages of 35 and 50 but can also be present in younger women.[63] Patients with adenomyosis often present with severe dysmenorrhoea and/or menorrhagia. Other possible symptoms are dyspareunia, chronic pelvic pain and irritation of the urinary bladder. Adenomyosis may involve the uterus focally, creating an adenomyoma. With diffuse involvement, the uterus becomes bulky and heavier.[64]

Symptoms and the estimated proportion of women affected include[65]

- Chronic pelvic pain (77 per cent).
- Heavy menstrual bleeding (40-60 per cent), which is more common in women with deeper adenomyosis. Blood loss may be significant enough to cause anaemia, with associated symptoms of fatigue, dizziness and moodiness.
- Abnormal uterine bleeding (incidence unknown but very common).
- Painful cramping menstruation (15-30 per cent).
- Painful vaginal intercourse (7 per cent).

Women with adenomyosis are also more likely to have other uterine conditions, including uterine fibroids (50 per cent), endometriosis (11 per cent) or an endometrial polyp (7 per cent).

Diagnosis

The gold-standard method to definitively diagnose adenomyosis is through a microscopical examination of small tissue samples of the uterus.[66] These can come from a uterine biopsy or directly following a hysterectomy.

Adenomyosis can vary widely in terms of the extent and location of its invasion within the uterus. As a result, there are no established pathognomonic features to allow for a definitive diagnosis of adenomyosis through non-invasive imaging. Nevertheless, non-invasive imaging techniques such as transvaginal ultrasonography (TVUS) and magnetic resonance imaging (MRI) can be used to strongly suggest the diagnosis of adenomyosis and classify its severity. [67] [68]

Treatment

Adenomyosis can only be cured definitively with surgical removal of the uterus. As adenomyosis is responsive to reproductive hormones, it reasonably abates following menopause when these hormones decrease. In women in their reproductive years, adenomyosis can typically be managed by providing pain relief, restricting progression of the process, and reducing significant menstrual bleeding. In women who are not wanting to conceive, hormone-releasing intrauterine devices or hormonal IUDs such as the Mirena are an effective treatment for adenomyosis.

Surgery

Broadly speaking, surgical management of adenomyosis is split into two categories: uterine-sparing and non-uterine-sparing procedures. Uterine-sparing procedures are surgical operations that do not involve surgical removal of the uterus. Some uterine-sparing procedures have the benefit of improving fertility or retaining the ability to carry a pregnancy to term. In contrast, some uterine-sparing procedures worsen fertility or even result in complete sterility. Non-uterine-sparing procedures, by definition, include surgical removal of the uterus.

Fertility

Adenomyosis itself can cause infertility. However, fertility can be improved if the adenomyosis has resolved following hormone therapies like levonorgestrel therapy as well as GnRh analogues alone or in combination with uterine-sparing surgery.[69] In sub-fertile women who received in-vitro fertilisation (IVF), women with adenomyosis were less likely to become pregnant and subsequently more likely to experience a miscarriage.[70] [71]

Case study from the clinic of Dr. Yuning Wu: Endometriosis and infertility

02.05.2006. Mrs. Zhou, age 36, presented with severe endometriosis and primary infertility after trying to conceive for six years and having several rounds of IVF.

Mrs. Zhou had suffered from severe dysmenorrhoea for nearly ten years and infertility for six years since marrying in 2000. In 2004 a laparoscopy revealed severe endometriosis with extensive pelvic adhesions and encapsulated mass – both the adnexa and uterus being conglutinated. After dissecting the adhesions, the fallopian tubes were partially exposed, and although severely swollen and twisted, blue dye was able to pass through. After the operation, she received three courses of GnRH-a injections but subsequently the dysmenorrhoea returned. She then received gestrinone, but because of the serious side effects she stopped it after two months. Nearly two years after her laparoscopy she started trying to conceive, naturally at first, followed by two IVF cycles with two fresh and one frozen embryo transfers (ET). After the failure of her IVF treatment, the pain, clots and heavy bleeding worsened. She was very sad and came for Chinese medicine treatment to prepare for her next round of IVF.

Mrs. Zhou complained of frequent lower abdominal stabbing pain during non-period times, severe abdominal pain a day before her period and severe dysmenorrhoea until a few days after her period. She had heavy, dark-red menstrual bleeding with clots, the passing of which relieved the pain. Her menstrual symptoms were accompanied by nausea and vomiting. The bleeding lasted six days and her cycle was 30-31 days. She also suffered from a dry mouth, thirst and lower back pain. Her bowel movements were regular and her sleep good. Her tongue

was tender and dark red with dark spots and a thin, yellow and dry coating. Her pulse was thin and slippery.

Disease diagnosis
Dysmenorrhoea/endometriosis, heavy bleeding, infertility.

Pattern differentiation
Blood stasis mixed with Kidney yin deficiency and empty heat.

Treatment principle
Invigorate blood to dispel blood stasis, soften lumps and loosen adhesions, reduce heavy bleeding, nourish Kidney yin and clear empty heat.

Prescription
Modified Yi Shen San Yu Fang (益肾散瘀方, Nourish the Kidney and Dispel Blood Stasis Formula, Dr. Wu's own formula)

Gou Qi Zi (Lycii Fructus) 15g
Xu Duan (Dipsaci Radix) 15g
Dang Gui (Angelicae sinensis Radix) 10g
Dan Shen (Salviae miltiorrhizae Radix) 15g
Tao Ren (Persicae Semen) 10g
San Leng (Sparganii Rhizoma) 10g
Xiang Fu (Cyperi Rhizoma) 10g
Bie Jia (Tryonycis Carapax) 10g cook first
Nu Zhen Zi (Ligustri lucidi Fructus) 20g
Tu Bie Chong (Eupolyphaga/Steleophaga)* 10g
Xia Ku Cao (Prunellae Spica) 12g
Lian Qiao (Forsythiae Fructus) 15g
E Jiao (Asini Corii Colla) 9g
Sheng Di Huang (Rehmanniae Radix) 10g

Instruction to patient
Use contraception to prevent a pregnancy, start BBT charting and carry out basic hormone tests.

Explanation
Mrs. Zhou's severe abdominal pain indicated blood stasis obstructing the collaterals, therefore the nourishing herbs Tu Si Zi and Shan Zhu Yu were taken out of the original prescription. Because of the presence of heat, warm E Zhu (Curcumae Rhizoma) was changed to cold Tu Bie Chong, and although the latter is slightly toxic it has a stronger ability to break up blood stasis and was therefore more suitable for this patient. Xia Ku Cao and Lian Qiao were added to clear heat, soften masses and resolve swelling. E Jiao and Sheng Di were added to nourish and cool blood and to control the heavy periods.

23.05, LMP: 11.05. The lower abdominal stabbing pain during her non-period time had disappeared, but her period pain and heavy bleeding were the same as before. Her ovulatory mucus had increased and her BBT was around 36.3C° and stable. Her tongue was markedly red. I decided to give her a formula to take throughout the cycle as well as a period formula to control the heavy bleeding and painful periods.

Prescription 1: to take throughout the cycle
As above minus Tu Bie Chong, plus Chi Shao (Paeoniae Radix rubra) 10g and Shui Zhi (Hirudo seu Whitmaniae).

Prescription 2, to take during from three days before and during the period
I told her that if there was any likelihood of pregnancy, she should only start taking this once the menses had begun.

Treatment principle
Nourish and invigorate blood, dispel blood stasis to reduce pain and heavy bleeding.

Prescription
Modified Tiao Jing Fang (调经方, Regulate the Menses Formula)

Dang Gui (Angelicae sinensis Radix) 10g
Tu Chao Bai Shao (Paeoniae Radix alba stir-baked with soil) 15g
Xiang Fu (Cyperi Rhizoma) 10g
Chao Wu Ling Zhi (dry-fried Trogopterori Faeces) 10g
Chao Pu Huang (dry-fried Pollen Typhae) 10g

* *Current Chinese Medicine hospital practice is that doses of Tu Bie Chong over 3g need signatures from two doctors before dispensing.*

Cu Yan Hu Suo (vinegar-treated Corydalis Rhizoma) 15g
Chuan Lian Zi (Toosendan Fructus) 9g
Wu Yao (Linderae Radix) 10g
Wu Zhu Yu (Evodiae Fructus) 2g
Chai Hu (Bupleuri Radix) 6g
Zhi Gan Cao (Honey fried Glycyrrhizae Radix) 6g
San Qi (Notoginseng Radix) 2 x 1.5g/day, taken separately with warm water.

Explanation
All the herbs in this prescription have the function of relieving pain. It combines *Shi Xiao San* (Sudden Smile Powder), *Jin Ling Zi San* (Melia Toosendan Powder) and *Shao Yao Gan Cao Tang* (Peony and Licorice Decoction). Chao Wu Ling Zhi, Chao Pu Huang and San Qi invigorate blood flow to reduce bleeding. Chai Hu raises qi and Bai Shao astringes blood therefore both are also good at reducing bleeding. Pungent-bitter-hot Wu Zhu Yu not only disperses cold and eliminates pain but stops vomiting.

13.06, LMP: 10.06. Her period was much more pain and clot free, without any nausea or vomiting and the quantity of bleeding was normal. Her last BBT was biphasic. I told her she could now try to get pregnant. She smiled, not believing that this miracle could happen to her.

Her prescription remained similar to that from 02.05, minus Tu Bie Chong, Tao Ren and Xia Ku Cao, and I added Chuan Shan Jia (Manitis Squama) powder* taken separately 2 x 1.5g/day, Han Lian Cao (Ecliptae Herba) 15g and Tu Si Zi (Cuscutae Semen) 15g. When the BBT had risen for two to three days post-ovulation, the patient was told to stop this prescripon in order to safeguard a possible pregnancy.

30.06. She was four days post-ovulation. Her tongue was tender, dark and red, with a thin, yellow and dry coating; her pulse was thin and slippery. We now added a post-ovulation formula to enhance the luteal phase and safeguard a possible pregnancy.

Pattern differentiation
Kidney yin deficiency with empty heat.

Treatment principle
Nourish Kidney yin and Liver blood, clear heat and consolidate the *Chong mai* in the post-ovulatory phase to promote pregnancy.

Modified Yi Shen Gu Chong Fang（益肾固冲方, Replenish the Kidney and Consolidate the Chong Formula, Dr. Wu's own formula)

Tu Si Zi (Cuscutae Semen) 15g
Gou Qi Zi (Lycii Fructus) 15g
Shan Zhu Yu (Corni Fructus) 10g
Xu Duan (Dipsaci Radix) 15g
Shan Yao (Dioscoreae Rhizoma) 15g
Lian Zi (Nelumbinis Semen) 10g
Chai Hu (Bupleuri Radix) 6g
Bai Shao (Paeoniae Radix alba) 10g
Dang Gui (Angelicae sinensis Radix) 6g
Huang Qin (Scutellariae Radix) 15g
Nu Zhen Zi (Ligustri lucidi Fructus) 20g
Han Lian Cao (Ecliptae Herba) 15g
Sheng Di Huang (Rehmanniae Radix) 10g

On her next visit, she reported that her period had arrived on 09.07 and her BBT showed a typical biphasic rise for 12 days. The dysmenorrhoea had continued to reduce. The three stages of prescriptions - during menstruation, after menstruation and after ovulation were the same as last month, according to the classical saying: *xiao bu geng fang* ('If the formula is effective, the prescription need not be changed').

06.08. Her BBT had risen for 14 days and remained high and her urine measured positive for HCG. When she came to my clinic she presented me with a bunch of red roses. She continued taking *Yi Shen Gu Chong Fang*.

On 19.08 her serum HCG was >5000iu/l and an ultrasound scan showed an embryo and a heart beat. Treatment continued until 14 weeks gestation. The whole pregnancy was peaceful, she carried to full term and gave birth to a healthy baby boy.

Comment
Mrs. Zhou came with severe endometriosis and primary infertility, two years after a laparoscopy and GnRH-a treatment and a history of IVF failures. After only three

** All eight species of pangolins are seriously endangered and their use is illegal in most countries. See Appendix 1.*

months of Chinese herbs, she conceived. In cases of severe endometriosis, if a laparoscopy is carried out and Chinese medicine treatment applied within one year, the pregnancy rate is high, even if the fallopian tubes are swollen and seriously twisted with adhesions. Treatment can even be very successful more than one year after surgery. If this patient had started treatment directly after her laparoscopy, she might have become pregnant much earlier and would not have had to experience so much distress and expense.

Case study from the clinic of Dr. Yuning Wu: Adenomyosis, adenomyoma and infertility

22.03.2008. Mrs. Lin, aged 39, came to my clinic with secondary dysmenorrhoea and infertility. She had suffered very painful periods and heavy bleeding for more than four years and had been trying to conceive for three years. Ultrasound in 2004 revealed the presence of adenomyosis.

Her blood was dark-red with large clots, and she had an 'unbearable' bearing-down sensation in the anus which was not eased by taking ibuprofen. She also complained of fatigue, dry mouth, dysphoria, dyspareunia, insomnia, reduced vaginal discharge and premenstrual breast swelling. Her bowel movements were regular. Her menses lasted seven days with a cycle length of 26-29 days. Her LMP was 18.03. She had had one artificial abortion in 2002. Tongue: swollen, tender, dark and red with dark spots at the tip and a thin, grey-yellow and dry tongue coating.
Pulse: thin and wiry.

Disease diagnosis
Dysmenorrhoea, adenomyosis, infertility.

Pattern differentiation
Qi stagnation and blood stasis mixed with Kidney yin deficiency and empty heat.

Treatment principle
Regulate qi and invigorate blood to dispel blood stasis, soften masses, replenish Kidney yin and clear empty heat.

Prescription
Modified Mu Jia Xiao Zheng Fang (牡甲消癥方, Prescription with Mu Li and Bie Jia to Remove Pelvic Masses, Dr. Wu's own prescription)

Sheng Mu Li (Ostreae Concha) 30g cook first
Dan Shen (Salviae miltiorrhizae Radix) 15g
San Leng (Sparganii Rhizoma) 10g
Shui Zhi (Hirudo seu Whitmaniae) 6g
Xia Ku Cao (Prunellae Spica) 12g
Tu Fu Ling (Smilacis Glabrae) 30g
Bei Mu (Fritillariae Bulbus) 10g
Chai Hu (Bupleuri Radix) 6g
Yu Jin (Curcumae Radix) 10g
Chi Shao (Paeoniae Radix rubra) 10g
Lian Qiao (Forsythiae Fructus) 15g
Bei Sha Shen (Glehniae Radix) 12g
Sheng Di Huang (Rehmanniae Radix) 6g

Explanation
This formula is discussed in Chapter 17: Myoma and was used here for abdominal masses/adenomyosis. In order to prevent a short cycle, Bie Jia was removed from the original prescription and Sheng Di Huang added. Because of the heat mixed with blood stasis, Dang Gui (Angelicae sinensis Radix) and E Zhu (Curcumae Rhizoma) were removed as they are too warming and Dan Shen and Chi Shao added instead. Bei Sha Shen was added for Kidney yin deficiency and Yu Jin for Liver qi stagnation. Because of her yellow tongue coating and insomnia, Huang Qi (Astragali Radix) was removed from the original prescription as it is too warm.

05.04, second visit. Her sleep was much better, there was occasional lower abdominal pricking pain and the BBT had risen slowly for seven days. Ultrasound on 03.04 showed a uterus of 6.8 x 5.3 x 5.2cm and a 1.2cm thick endometrium. The posterior wall of the uterus was thickened with an intensive 3.9 x 3.4cm echogenic area and light spots, without a border. Her CA125 was 48.3u/ml (normal limit<25 u/ml). An adenomyoma was diagnosed. I asked her to continue to take the above medicine until the 24th-25th day of her cycle and then change to *Modified Tiao Jing Fang* (调经方, Regulate the Menses Formula) as follows.

Dang Gui (Angelicae sinensis Radix) 10g
Chai Hu (Bupleuri Radix) 6g
Tu Chao Bai Shao (Paeoniae Radix alba stir-baked with soil) 15g
Yi Mu Cao (Leonuri Herba) 10g
Xiang Fu (Cyperi Rhizoma) 10g

Chao Wu Ling Zhi (dry-fried Trogopterori Faeces) 10g
Chao Pu Huang (dry-fried Pollen Typhae) 10g
Cu Yan Hu Suo (vinegar-prepared Corydalis Rhizoma) 15g
Chuan Lian Zi (Toosendan Fructus) 9g
Wu Yao (Linderae Radix) 10g
Zhi Gan Cao (honey fried Glycyrrhizae Radix) 6g
San Qi (Notoginseng Radix) powder 2 x 1.5g/day, taken separately with warm water, or 4 x 1.5g/day, if bleeding is exceptionally heavy.

19.04, third visit, LMP: 13.04 with a cycle length of 26 days. Her dysmenorrhoea was improving, but she still needed analgesics and home rest for one day. The quantity of bleeding and clots was much reduced and she no longer felt tired. Her non-period and period prescriptions were changed.

Non-period-prescription
I added Qian Cao Tan (carbonised Radix Rubiae Cordifoliae) 15g, Tu Bie Chong (Eupolyphaga/Steleophaga) 10g*, and Han Lian Cao (Ecliptae Herba) 15g to the prescription from 22.03 and removed Shui Zhi. The dose of Sheng Di Huang was increased to 10g.

Period prescription (from cycle day 25 and during the period)
Modified Tiao Jing Fang according to the prescription from 05.04 with added Li Zhi He (Semen Litchi Chinensis) 10g.

17.05, fourth visit, LMP: 11.05, 28 day cycle. Her dysmenorrhoea was significantly relieved, as was the clotting and quantity of bleeding. Her last BBT chart was biphasic with a 12 day luteal phase. Her tongue was tender, dark and red, the dark spots had lightened, her tongue coating was thin and grey, and her pulse was thin and wiry. I told her she could try to get pregnant.

Treatment principle
Nourish Kidney yin and blood, invigorate blood and dispel stasis, promote ovulation.

Prescription
Sheng Mu Li (uncooked Ostreae Concha) 30g cook first
Bie Jia (Tryonycis Carapax) 10g cook first
Dang Gui (Angelicae sinensis Radix) 10g
San Leng (Sparganii Rhizoma) 10g
Xia Ku Cao (Prunellae Spica) 12g
Lian Qiao (Forsythiae Fructus) 15g
Han Lian Cao (Ecliptae Herba) 15g
Gou Qi Zi (Lycii Fructus) 15g
Tu Si Zi (Cuscutae Semen) 15g
Dan Shen (Salviae miltiorrhizae Radix) 15g
Yu Jin (Curcumae Radix) 10g
Sheng Di Huang (Rehmanniae Radix) 10g and Di Gu Pi (Lycii Cortex) 10g
Chuan Shan Jia (Manitis Squama)* powder 2 x 1.5g/day, taken directly with warm water

Explanation
I removed Bei Mu, E Zhu, Tu Bie Chong, Tu Fu Ling and Chai Hu from the original prescription, and added Han Lian Cao, Gou Qi Zi, Tu Si Zi and Bie Jia to strengthen the Kidney and promote ovulation. I further added Dan Shen, Yu Jin and Chuan Shan Jia to invigorate blood and dispel stasis and channel obstruction. I asked the patient to take this prescription until her BBT had risen for three days.

30.05, fifth visit. Her ovulatory mucus had increased considerably for 2-3 days and her BBT rose on 26.05. We could now add a luteal phase formula to encourage implantation.

Treatment principle
Tonify Kidney and Spleen, and nourish blood to consolidate the *Chong mai* and the luteal phase.

Prescription
Modified Yi Shen Gu Chong Fang (益肾固冲方, Replenish the Kidney and Consolidate the Chong Formula)

Tu Si Zi (Cuscutae Semen) 15g
Shan Zhu Yu (Corni Fructus) 10g
Gou Qi Zi (Lycii Fructus) 15g
Shan Yao (Dioscoreae Rhizoma) 15g

** Current Chinese Medicine hospital practice is that doses of Tu Bie Chong over 3g need signatures from two doctors before dispensing.*

** All eight species of pangolins are seriously endangered and their use is illegal in most countries. See Appendix 1.*

Nu Zhen Zi (Ligustri lucidi Fructus) 20g
Han Lian Cao (Ecliptae Herba) 15g
Dang Gui (Angelicae sinensis Radix) 10g
Bai Shao (Paeoniae Radix alba) 10g
Sheng Di Huang (Rehmanniae Radix) 10g
E Jiao (Asini Corii Colla) 9g (melt)
Lian Qiao (Forsythiae Fructus) 15g

From then on I gave Mrs. Lin modified *Tiao Jing Fang* (to take for four to six days at the onset of menstruation) and *Mu Jia Xiao Zheng Fang* and *Yi Shen Gu Chong Fang* according to the stages of her cycle.

09.08, sixth visit, LMP: 08.07 when her BBT had remained elevated for 19 days and her urine and serum HCG were positive. She had only mild abdominal bearing-down sensations. *Modified Yi Shen Gu Chong Fang* was given until 12 weeks of gestation. Her pregnancy was smooth and she gave birth at term to a healthy boy in April 2009.

Comment

Mrs. Lin suffered from adenomyosis and adenomyoma with severe dysmenorrhoea and heavy bleeding. After two months of treatment all her symptoms improved, her BBT became biphasic and she was told that she could try to conceive (and given her age, the sooner the better). After only four months of treatment she conceived.

Case study from the clinic of Esther Denz: Endometriosis, dysmenorrhoea and heavy bleeding

In April 2011, J., aged 29, came to my clinic having been diagnosed with Stage 3 endometriosis. She had stopped taking the oral contraceptive pill 18 months prior to her appointment because she wanted to become pregnant. Her very painful periods and inability to conceive had led to a suspicion of endometriosis, which was confirmed through a laparoscopy in January.

Her endometriosis was confined to the reproductive organs. At the time of her laparoscopy she had one endometrioma (3cm) on her right ovary. After her laparoscopy her reproductive endocrinologist (RE) prescribed Visanne (dienogest) in order to suppress reproductive hormones and ovulation and reduce the inflammation. Visanne is a hormonal preparation similar to the contraceptive pill, often prescribed for endometriosis and given after a laparoscopy. The RE's plan was to stop Visanne after three months and to immediately follow it with an IVF cycle. However, J. decided to discontinue the Visanne and postpone her IVF appointment as she was not comfortable with trying IVF before attempting a natural pregnancy.

Unfortunately, with her aggressive endometriosis, she had developed a new cyst at the time of her appointment with me, and had suffered severe dysmenorrhoea with her last period. Her dysmenorrhoea manifested with abdominal and sacral pain, beginning several days before the period and intensifying during the menses. She had dark red clotted bleeding which typically lasted eight days (four days very heavy and four days lighter). Her cycle was 30 days. She had a history of PMS with irritability, mild depression and occasional breast tenderness.

Her bowel movements were irregular, ranging from daily to every four days, with soft stools and a feeling of incomplete evacuation. She suffered from varicose and spider veins and her hands and feet were cold, further indicating poor circulation. She also had noticeable dark circles under her eyes. Her tongue was swollen with teethmarks, pale, peeled and red at the tip, with red sides. Her pulse was rapid, slightly slippery and forceful.

Chinese medicine disease diagnosis

Endometriosis with dysmenorrhoea and heavy bleeding.

Pattern differentiation

Kidney yin deficiency with empty heat, Spleen qi deficiency, qi and blood stagnation and heat.

Treatment principle

Dispel stagnation of qi and blood throughout the cycle, nourish Kidney yin, clear heat. Dietary advice was given to address the Spleen qi deficiency.

As her endometriosis was severe, I asked her to take herbs both orally and via an enema, with a period formula for pain and heavy bleeding during menstruation. The daily rectal enema – a treatment I suggest to 90 per cent of my endometriosis patients - would address qi and blood stagnation and the local pain.[72]

The RE had recommended the birth control pill to prevent further cysts from forming, so there was no need to safeguard against pregnancy at this time.

Prescription 1 (from CD 7 until two days before her period, granules 3x/day at 4g per time).

Chai Hu (Bupleuri Radix) 6g
Tao Ren (Persicae Semen) 10g
San Leng (Sparganii Rhizoma) 10g
E Zhu (Curcumae Rhizoma) 10g
Dan Shen (Salviae miltiorrhizae Radix) 15g
Zhi Zi (Gardeniae Fructus) 10g
Mu Dan Pi (Moutan Cortex) 10g
Yu Jin (Curcumae Radix) 10g
Lian Qiao (Forsythiae Fructus) 15g
Pu Gong Ying (Taraxaci Herba) 15g
Yu Zhu (Polygonati odorati Rhizoma) 12g
Tu Si Zi (Cuscutae Semen) 15g
Bie Jia (Trionycis Carapax) 15g
Fu Ling (Poria) 12g

Explanation
This formula is designed to treat qi and blood stagnation, clear heat and support the Kidney. To move qi and blood and to shorten her cycle to 28 days, I used Chai Hu, Tao Ren, San Leng and E Zhu. To address the heat, cooling herbs Dan Shen, Zhi Zi, Mu Dan Pi, Lian Qiao and Pu Gong Ying were used. Mu Dan Pi and Zhi Zi also treat the PMS. Cooling and neutral Yu Zhu, Bie Jia and Tu Si Zi support the Kidney. Bie Jia and Dan Shen can also help to shorten the cycle. Fu Ling was added to strengthen the Spleen and help drain any dampness that was contributing to cyst formation. Addressing the underlying heat and blood stasis would treat the root of the heavy bleeding. Once the menses began, a new formula would be used to address the heavy bleeding.

Period prescription (granules taken 3 x 4g/day, starting two days before menstruation through to CD6).

Bai Shao (Paeoniae Radix alba) 10g
Yi Mu Cao (Leonuri Herba) 10g
Xiang Fu (Cyperi Rhizoma) 10g
Wu Ling Zhi (Trogopterori Faeces) 10g
Yan Hu Suo (Corydalis Rhizoma) 15g
Wu Yao (Linderae Radix) 10g
Li Zhi He (Litchi Semen) 10g
Pu Huang Tan (carbonised Pollen Typhae) 10g
Chuan Lian Zi (Toosendan Fructus) 6g
San Qi (Notoginseng Radix) 3g
Chai Hu (Bupleuri Radix) 6g
Xue Jie (Daemonoropis Resina) 3g
Tu Si Zi (Cuscutae Semen) 15g

Explanation
This formula is based on *Tiao Jing Fang* (Regulate the Menses Formula) which contains Dang Gui, Bai Shao, Xiang Fu, Pu Huang, Wu Ling Zhi, Xiang Fu and Yi Mu Cao to move and astringe blood. In the presence of heat signs and heavy bleeding, I generally omit warming Dang Gui. Pu Huang Tan rather than Pu Huang was used to control heavy bleeding. To further relieve pain and invigorate blood I added Chai Hu, Li Zhe He, Chuan Lian Zi and Wu Yao to spread qi in the Liver channel and therefore indirectly invigorate blood. Xue Jie and Yan Hu Suo invigorate blood and alleviate pain. Since the bleeding was heavy, it was important to add 3g of San Qi to prevent excessive bleeding. Tu Si Zi was added to support the Kidney.

Rectal enema prescription (to take daily after menstruation until the next bleed)
Xia Ku Cao (Prunellae Spica) 12g
Tu Fu Ling (Smilacis Glabrae Rhizoma) 12g
Lian Qiao (Forsythiae Fructus) 12g
Pu Gong Ying (Taraxaci Herba) 12g
Tao Ren (Persicae Semen) 12g
E Zhu (Curcumae Rhizoma) 12g
San Leng (Sparganii Rhizoma) 12g
Dang Gui (Angelicae sinensis Radix) 12g
Mu Dan Pi (Moutan Cortex) 12g
Di Gu Pi (Lycii Cortex) 12g

Explanation
Xia Ku Cao cools Liver fire and dissipates phlegm-heat nodules. Tu Fu Ling drains damp and relieves toxic heat. Lian Qiao and Pu Gong Ying relieve toxic heat, heal abscesses and dissipate nodules. Tao Ren invigorates blood. E Zhu and San Leng break up blood stasis in the reproductive organs. Dang Gui tonifies and gently invigorates blood and treats dysmenorrhoea. Mu Dan Pi

cools both empty and full heat and addresses blood stasis. Di Gu Pi cools blood and treats empty-heat.

Acupuncture was applied weekly. After ovulation and before menstruation I used the acupuncture method of treating the *Chong mai,* opening with Gongsun SP-4 (R), then Diji SP-8 (xi-cleft point) and Qichong ST-30, and closing with Neiguan P-6 (L), plus Ligou LIV-5 and Xuehai SP-10. I also 'opened' the *Ren mai* with Zhaohai KID-6 (L) and Lieque LU-7 (R), then Taixi KID-3 and Sanyinjiao SP-6. During menstruation I cleared heat, cooled and moved blood and alleviated pain with Ligou LIV-5, Xuehai SP-10, Diji SP-8, Zhongji REN-3, Guilai ST-29, Tianshu ST-25, Baihuanshu BL-30, Shangliao BL-31 and Ciliao BL-32. After menstruation I cleared heat, nourished yin, and regulated qi and blood in the lower abdomen with Ligou LIV-5, Ququan LIV-8, Xuehai SP-10, Yinbao LIV-9, Quchi L.I.-11, Zhongji REN-3, Siman KID-14 and Zigong M-CA-18.

After one month of treatment, the contraceptive pill was stopped for five days to allow her period to arrive. Her bowels had become regular and her PMS symptoms were mild. However, her menstrual blood still contained clots and she still had heavy bleeding for six days. J. reported feeling tired, which is a common finding for women with heavy, prolonged bleeding. After another month, she stopped taking the oral contraceptive pill altogether. It was unclear whether she had been ovulating normally before the contraceptive pill, so J. agreed to record her BBT. As her BBT confirmed ovulation and J. was now actively seeking to become pregnant, we had to change the treatment. She took the first prescription and the rectal enema only until two days after ovulation and then swapped to the following luteal phase prescription.

Yi Shen Gu Chong Fang (Replenish the Kidney and Consolidate the Chong Formula) granules 2 x 6g/day.

Tu Si Zi (Cuscutae Semen) 10g
Fu Pen Zi (Rubi Fructus) 8g
Gou Qi Zi (Lycii Fructus) 10g
Shan Zhu Yu (Corni Fructus) 10g
Shan Yao (Dioscoreae Rhizoma) 10g
Bai Shao (Paeonia Radix alba) 10g
E Jiao (Corii Asini Colla) 6g
Chai Hu (Bupleuri Radix) 6g
Nu Zhen Zi (Ligustri Lucidi Fructus) 12g
Sheng Di Huang (Rehmanniae Radix) 10g
Han Lian Cao (Ecliptae Herba) 12g
Bei Sha Shen (Glehnia Radix) 10g
Sang Ji Sheng (Taxilli Herba) 10g

Explanation

Yi Shen Gu Chong Fang is a typical prescription for the luteal phase and is considered a baby-safe formula. It supports the developing embryo with Kidney and Spleen tonics, astringent herbs and herbs to nourish blood and *jing*. Nu Zhen Zi, Sheng Di Huang, Han Lian Cao and Bei Sha Shen all nourish support yin, and, in the case of Nu Zhen Zi and Han Lian Cao, also clear empty heat. I like to add Sang Ji Sheng in cases with pronounced yin deficiency.

J. experienced only two days of heavy bleeding, her dysmenorrhoea resolved, and she had no more premenstrual pain. The visibly dark circles under her eyes had improved. She followed my dietary advice for three months, eating regularly, prioritising warm foods, avoiding dairy products and consuming little meat. She had also used a qi and blood tonifying recipe for chicken soup. Her tongue no longer showed as much puffiness.

She continued to record her BBT and in July it was perfect with no abnormalities. She conceived that cycle and gave birth to a healthy baby in March 2012. In May 2013, she came back to the clinic because she wanted another child. The cyst in her right ovary had grown to 6cm, despite being on the oral contraceptive pill since giving birth to keep the endometriosis at bay. We decided to try the same approach as last time. She took the pill for a month and during that time she used the enemas and the first strong blood invigorating formula during the entire cycle. She used the period formula for dysmenorrhoea when her menses came. The second month she discontinued the pill, and after ovulation took the luteal phase formula to support pregnancy. In August 2013, she conceived again and gave birth to her second child in 2014.

Comment

In my clinical experience, patients with endometriosis often present with heat and qi and blood stagnation. Typically, they will have heavy and very painful periods. No matter what other signs and symptoms are present,

in patients with severe endometriosis it is of primary importance to treat cysts and adhesions and reduce pain and inflammation. The formulas I used in this case have helped many similar patients become pregnant. When the tongue, pulse and/or symptoms indicate concurrent Spleen qi deficiency, I stress to the patient how helpful dietary and lifestyle changes can be.

In this case, though her RE had recommended IVF, J. was able to have not just one, but two natural pregnancies through a combination of hormonal medications (the CP), Chinese medicine herbal formulas (including retention enemas) and acupuncture.

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1 Generally speaking, if CA125 is higher than 35U/ml, then endometriosis is active.

2 There is substantial evidence to show that the typical western diet aggravates the symptoms of endometriosis, in particular the excessive intake of convenience food, refined sugar, salt, additives, dairy products, red meat and wheat. There is evidence of a direct connection between meat and dairy intake and an inflammatory response in the body. (D Shepperson Mills, MW Vernon (2002). *Endometriosis: A Key to Healing and Fertility Through Nutrition.* London: Thorsons Publishers.) Many patients who make a concerted effort to improve their diet frequently experience relief of their symptoms. Resumption of a poor diet often means a return of abdominal discomfort and pain.

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