
7

Third trimester: 28 to 40 weeks

During the final 3 months of pregnancy, most women start to feel much larger and heavier. There is often a spurt of weight gain, which is probably due to the weight of the growing baby and the increase in amniotic fluid.

Although some women may still be enjoying the traditional 'bloom' of pregnancy, many will be feeling very tired and uncomfortable. They may also be suffering from such minor problems and discomforts as breathlessness, insomnia, back ache, constipation, piles and heartburn.

Common terms used in the third trimester

CPD. Cephalopelvic disproportion is failure of the fetal head to descend through the pelvis despite strong uterine contractions.

Doppler. Doppler ultrasound is a way of imaging blood flow in vessels using the Doppler effect—the frequency shift in the echo from flowing blood indicates the nature of the flow.

IUGR. Intrauterine growth retardation is when the baby fails to gain weight or its weight falls suddenly below the norm, perhaps because of congenital malformation but more usually because the amount and quality of nourishment received from the placenta has declined.

Oblique (or transverse) lie. Here the fetus lies horizontally across the womb rather than with its head down. A shoulder presentation would make vaginal delivery impossible, and if suspected in late pregnancy should be confirmed by ultrasound diagram to show oblique lie.

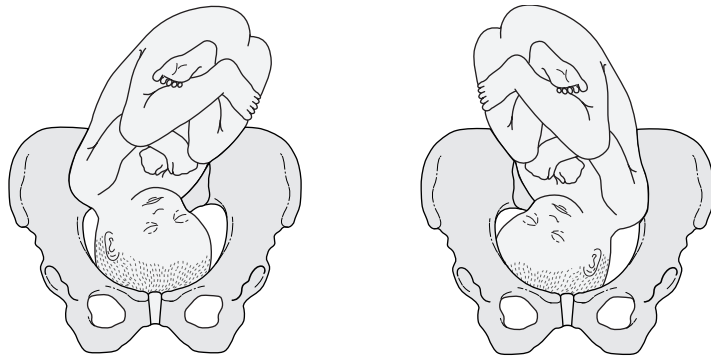
OP position. Occipitoposterior (OP) position is a malposition of the vertex presentation (Fig. 7.1).

Placental insufficiency. This is an inability of the placenta to perform its functions properly, putting the fetus in jeopardy.

Small for dates. This indicates babies who are growing but consistently fall below the accepted norm for size.

Unstable lie. Here the fetus keeps changing position in the womb after 36 weeks.

Figure 7.1 *Right and left OP positions.*
(Reproduced with permission from Sweet 1997, p. 632.)



Anatomy and physiology

By week 28, breast tissue will be developing and the breasts will be starting to produce colostrum, the fluid that precedes milk.

By week 32, the blood volume circulating round the body will have increased by around 40% to accommodate the needs of the fetus, the placenta, the uterus and the breasts.

By week 36, pressure from the uterus may be pressing against the lungs and causing slight breathlessness.

The pelvic joints will be starting to soften and expand in preparation for birth.

Importance of the placenta in the third trimester

In most women the placenta reaches its maximum efficiency at around 37 to 38 weeks. As detailed in Chapter 2, the placenta acts as a substitute lung, liver and kidney for the fetus; it also stores energy as glycogen to feed the baby as required, and it provides an immune barrier.

In addition, the placenta produces a number of hormones, including:

- HCG, which increases absorption of calcium and stimulates milk production
- oestrogen, which stimulates the breasts and uterus and regulates fetal growth
- progesterone, which helps to maintain the pregnancy, stimulates the breasts and relaxes the muscles
- relaxin, which softens the cervix and loosens the ligaments in preparation for birth.

If the placenta stops working efficiently before 38 weeks, the baby's development is affected, leading to low birth weight.

By the end of the third trimester the placenta is usually around 17.5 to 20 cm wide and 2.5 cm thick, and weighs about one-sixth of the baby's birth weight. It is delivered during the third stage of labour.

Mental and emotional aspects

Bringing a new life into the world requires all sorts of emotional adjustments and can throw up many difficult feelings, which need to be worked through. This goes far beyond a superficial 'loss of body image' or 'resentment of loss of freedom'. Mothers need time to prepare—emotionally, as well as practically and physically—to the transformations involved in becoming a parent. First time mothers in particular, many of whom work much longer and later in their pregnancies, leave themselves little time for mental preparation before their baby arrives. It is possible this may have a detrimental affect on the fetus, whose growth rate can slow down if the mother does not take time to rest and prepare herself.

It is too easy to dismiss negative feelings as the result of hormonal changes, and women need to be able to express such feelings in a supportive environment in order to accept and come to terms with them.

Every woman responds in her own unique and individual way, depending on:

- her personal circumstances
- her self-image—the way she sees herself as a woman and as a mother
- her relationship with her own mother and her maternal role models
- her relationship with the baby's father
- the way she views her own place in society
- ambivalence about the pregnancy—whether or not the baby was wanted and planned for
- ill health experienced as a result of the pregnancy.

As full term approaches, some women also experience increasing anxiety about the labour and delivery. This can range from mild worry to a full-blown panic attack. It may be based on ignorance, on misinformation (too much listening to old wives' tales and the gossip of other mothers), or it may be the result of a bad experience in a previous pregnancy. Whatever the reason, talking such fears through with a sympathetic midwife or practitioner can go a long way to reassure and encourage.

Common ailments of the third trimester

To ensure the well-being of mother and baby, the frequency of antenatal visits increases from every 4 weeks to every 2 weeks in the third trimester. Abdominal examinations after the 28th week will determine the lie, presentation and position of the fetus, as well as the height of the uterine fundus, and from 36 weeks it may also be possible to determine engagement of the head.

Anaemia

Oxygen is needed by every single cell in the body. It is transported by a pigment in the red blood cells called haemoglobin. These cells are formed in the bone marrow and released into the blood, where they circulate for approximately 120 days. When they die, they are destroyed by the spleen. Under normal circumstances, a woman's haemoglobin level

is between 11 and 15 g (Sweet 1997). A stable level is maintained in the blood by the body strictly balancing the number of red cells produced in the bone marrow and the number destroyed by the spleen. If this balance is upset and the number of red blood cells reduced, anaemia results and it can take quite a while to bring the haemoglobin back up to normal limits.

Total blood volume increases during pregnancy, but the number of red blood cells does not increase at the same rate, so that the level of haemoglobin in the blood is reduced. Opinion about safe levels of haemoglobin varies, but usually ranges between 10 and 13 g/dl.

It is important that blood is taken at between 28 and 32 weeks to check haemoglobin levels, as anaemia could pose a threat to the health of both mother and baby if left untreated.

The *effects* of anaemia in pregnancy include: undermining of the general health, lowered resistance to infection, exacerbation of minor pregnancy disorders such as digestive problems, intrauterine hypoxia (in severe cases), risk of premature labour, increase in perinatal mortality, risk of antepartum and postpartum haemorrhage, higher risk of thromboembolic disorders and increase in maternal mortality.

There are five different *types* of anaemia:

- iron deficiency anaemia—the commonest form in pregnancy
- folic acid deficiency anaemia
- haemoglobinopathies, which include sickle cell disease and thalassaemia
- anaemia as a result of blood loss or secondary to infection
- aplastic varieties, rare in pregnancy

The *symptoms* of iron deficiency anaemia include: shortness of breath, tiredness, dizziness and fainting, pallor, palpitations, loss of appetite, and headaches.

Those most at risk of iron deficiency anaemia are women who

- are poorly nourished
- generally lose excessive amounts of blood during menstruation (women who have had heavy periods before conception may enter pregnancy already marginally anaemic)
- have repeated pregnancies, especially ones that are close together
- have a multiple pregnancy
- use alkaline preparations to relieve heartburn
- have a diet low in vitamin C
- suffer from repeated vomiting or diarrhoea
- suffer bleeding from haemorrhoids or antepartum haemorrhage
- suffer from internal parasites such as hookworm
- have malabsorption problems such as coeliac disease.

Western medicine generally treats anaemia with iron preparations, sometimes in combination with folic acid.

Diet advice for anaemia

Iron, protein, copper, folic acid and vitamins B6, B12 and C are all necessary for the formation of red blood cells, so a deficiency in any of these nutrients can cause anaemia. (For good food sources of these see Ch. 3.) But iron deficiency anaemia can occur even if the diet is rich in iron, because a lack of B vitamins can result in poor absorption of iron. Factors which interfere with iron absorption include: high zinc intake, tea and coffee, antacids given for heartburn, and dairy products—try to eat dairy-rich and iron-rich foods separately.

To absorb iron more efficiently, take your supplement with vitamin C—a glass of fresh orange juice or a portion of blackberries.

Treatment with acupuncture

In Chinese medicine, the Blood is seen as more than just a collection of cells. Blood is Yin and is regarded as receptive and sensitive, the seat of our emotions. So the relationship between the Blood and our emotional state is very important. If the Blood is low, a woman is likely to feel weak, anxious and depressed.

The function of the Blood is also to cool and moisturise. If the Blood is weak, there will be symptoms of Heat: flushes, dry skin, constipation, joint tingling and numbness.

Blood is created from the nutrients in the food we eat by the action of the Spleen, combined with the Kidney Essence known as the Jing. Most of our Jing is stored in the Bone Marrow.

The organs responsible for the blood in Chinese terms are the Heart, the Liver (because it stores the Blood), the Spleen (because it makes the Blood) and the Kidneys (because of the Essence and Bone Marrow). Any disturbance in these organs can lead to problems with Blood imbalance. Anaemia is usually linked to Blood deficiency. The actual manifestation depends on which organ is involved.

For example, Heart symptoms would include palpitations, poor memory, insomnia, dreams and disturbed sleep, and pale complexion and colourless lips.

If a woman enters pregnancy having had a lot of emotional problems, she will generally be Qi and Blood deficient. A Spleen Qi Deficiency is usually at the root of this, as the Spleen generates the Blood.

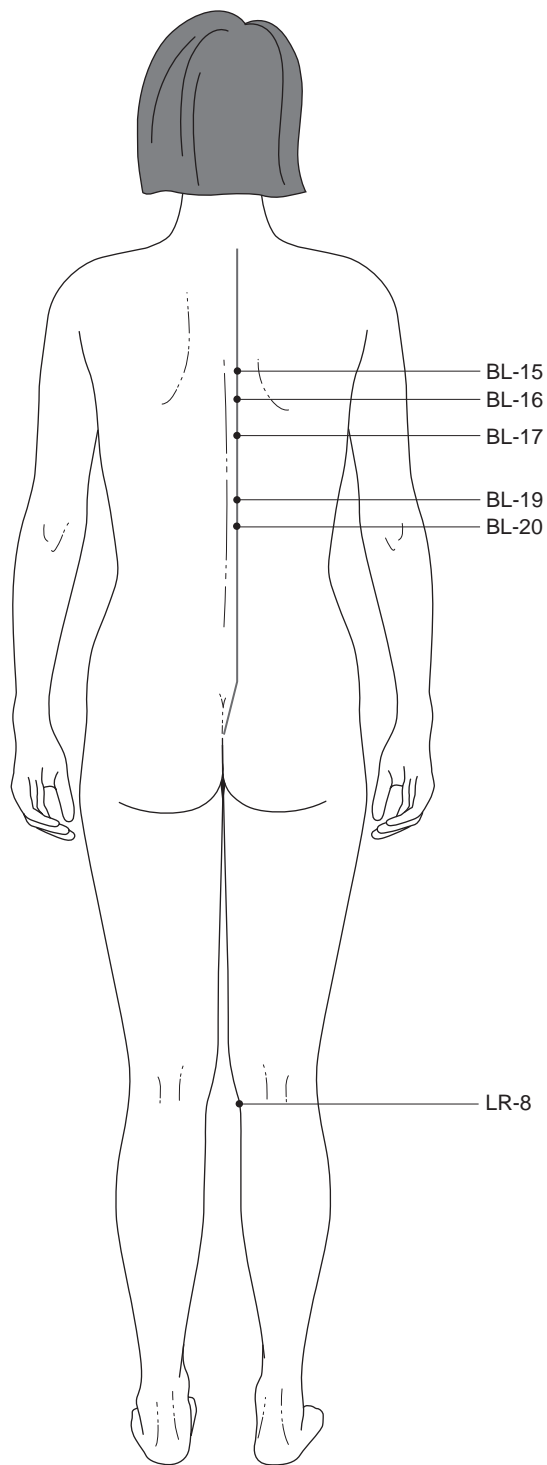
Points to treat All the points mentioned below (see Fig. 7.2) are tonified:

- BL-17 is an influential point for the Blood and I use it in all cases of anaemia (moxa cones can be applied)
- If a woman is very deficient, then combine BL-17 with BL-15, the Back Shu point of the Heart, which tonifies the Heart Qi.

When treating the Heart, the Kidney may also need to be treated. When the Heart is settled, the balance between the Yin and Yang of the Kidneys can be maintained.

Liver Blood symptoms would include: tiredness, weakness, cramps, blurred vision, tingling or numbness of the limbs, brittle nails, dry skin and dull hair.

Figure 7.2 Points useful for the treatment of anaemia.



Points to treat Once again, all the points require tonification.

- BL-17 is an influential Blood point combined with BL-18, the Back Shu point of the Liver; heat with moxa
- LR-8 nourishes the Liver Blood.

If the Spleen is deficient, it cannot make Blood and this will in turn affect the Liver, causing Liver Blood deficiency. If you are treating Liver Blood deficiency, add Spleen points and also tonify BL-20.

Cramps

Muscular cramps, usually in the legs, can be very painful and are often reported by pregnant women. The cause is unknown, although it may be linked to a deficiency of magnesium, calcium or vitamin B.

Regular gentle exercise—walking, swimming or yoga—may help to improve the circulation and prevent cramps. In an attack, stretching and extending the limb and firmly massaging the calf muscle may help to relieve the pain. Night cramps can also be helped by massaging the legs before going to bed and by raising the foot of the bed by 20 to 25 cm.

There is always the slight possibility that cramps could be associated with deep vein thrombosis, so if they keep recurring this should be checked out medically.

Treatment with acupuncture

Use tonification of LR-8.

Insomnia

These days women very often work much later into their pregnancy. Often it is difficult for them to unwind and their minds are too active at night to let them get the rest they badly need. They start to get tired and complain about lack of sleep, especially from around 34 weeks. The discomfort of a growing abdomen adds to the problem. Many women find it increasingly difficult to get comfortable in bed. Sleeping on the back can cause feelings of faintness, because the pressure of the baby weighs on the main internal blood vessels. Sleeping on the tummy becomes impossible, for obvious reasons. But sleeping on the side is not comfortable for some women. Nights can also be broken by the need to get up to pass urine.

Heartburn, the reflux of acidic stomach contents causing a burning sensation in the oesophagus, can be exacerbated by lying down, so can add to sleep disturbance. This is commonly worse towards the end of pregnancy, when the growing baby pushes upwards, compressing the space between the oesophagus and the stomach. Sleeping in a more upright position can be helpful.

There is little that Western medicine can offer the pregnant insomniac, other than general advice about allowing time to relax and unwind in the evening, taking a warm bath, a hot soothing drink or a relaxing massage.

Chinese viewpoints

Mental as well as physical overwork, long hours spent working without adequate rest over many weeks and months, plus the strain of a pregnancy: all this weakens the Kidney Yin. This fails to nourish the Heart Yin, so the Kidneys and Heart are not harmonised.

Worry also affects the Spleen and if it is already deficient, it cannot produce Blood and the deficiency affects both the Heart and the Mind.

This usually falls into two patterns: either Full and Excess conditions or Deficient conditions. Deficient conditions affect the Heart, Spleen and Liver.

Heart and Spleen Blood deficiency is very common in women who are anaemic. Women suffering from this will experience: difficulty in falling asleep, palpitations, tiredness, poor memory, and mild anxiety.

Points to treat Treatment would be to tonify the Spleen and the Heart:

- tonify ST-36 and BL-20 to help produce the Blood
- tonify BL-15 to nourish the Heart Blood
- tonify BL-17 to calm the mind for sleep; moxa can also be added.

I find sometimes in women who have had IVF treatment or fertility drugs, both of which can be very taxing on the Kidneys, that the Heart and Kidneys are not harmonised. Symptoms include: waking frequently at night, night sweats, a poor memory, mental restlessness, and backache.

Points to treat

These include:

- BL-15 and 23 to harmonise the Heart and Kidneys
- HT-7 to calm the Mind.

Abdominal pain

There will always be some degree of abdominal pain in pregnancy but if it is severe I would insist that the woman contact her doctor as well as offering treatment myself.

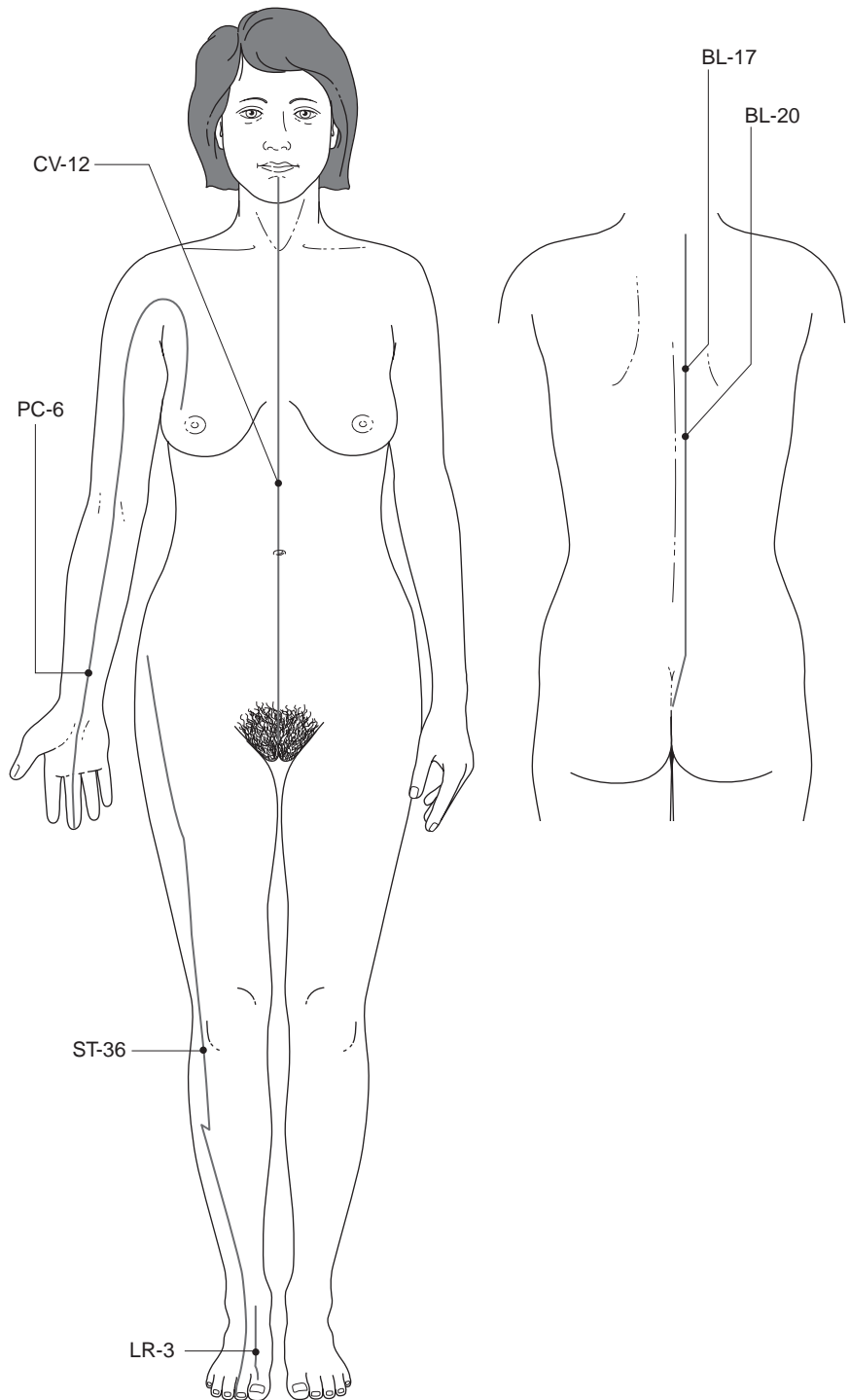
Abdominal pain may be due to ectopic pregnancy (a pregnancy that occurs outside the uterus in the fallopian tubes). This is usually accompanied by vaginal bleeding as well as abdominal pain and is potentially fatal.

Another possibility is fibroids—these may have been present before the pregnancy but, due to the increased blood supply in pregnancy, a fibroid may enlarge, often causing abdominal pain. (This equates in Chinese medicine to Blood stasis.) Do not treat fibroids in pregnancy.

Treatment with acupuncture

In Chinese terms, the main reason for abdominal pain would be Blood stasis, poor circulation of Qi and Blood, and Blood deficiency. A pre-existing Blood Deficiency is also likely to cause abdominal pain, as the blood is diverted to nourish the fetus. Emotional problems, especially anger and resentment, will cause Liver Qi stagnation.

Figure 7.3 Points useful for the treatment of abdominal pain.



Points to treat I have tried a variety of points (Fig. 7.3), always avoiding the abdomen directly, and have found BL-17 and BL-20 to be effective. Tonify with moxa cones. The Spleen is considered the foundation of

postnatal life and the source of Blood and these points strengthen the Spleen and the Blood, especially where the pain is due to Blood deficiency.

If the cause is stagnation of Qi, the symptoms will be a distending pain in the lower abdomen. Such women are usually very irritable and depressed, and probably suffered a lot of Liver Qi stagnation prior to getting pregnant. Use even technique on PC-6 and LR-3 together, to calm the mind and move the Qi.

One woman I treated was admitted to hospital with severe abdominal pain. She was very irritable and depressed. Although given every test possible, no medical explanation could be found for her pain. I treated her with acupuncture and there was a definite improvement using the above points.

If the pain is due to Cold and the woman finds the pain improves when she uses heat, moxa can be used on CV-12 and ST-36 (depending on how many weeks pregnant she is).

Oedema

Mild swelling of the ankles, feet and hands is considered normal in the later stages of pregnancy. It usually occurs during the third trimester and is experienced by over half of normotensive women. For a few women, however, the swelling becomes severe and so painful that they are unable to walk. Swelling of the hands is known as carpal tunnel syndrome (see p. 113).

Water accounts for three-fifths of the body's weight and is constantly being exchanged between blood and tissues. Various disorders can interfere with this process. During pregnancy, the blood becomes more dilute and greater in volume, and because of the force of gravity the excess tissue fluid tends to gravitate towards the extremities. Provided the blood pressure and urine are tested frequently and remain normal, nothing needs to be done medically. This type of swelling tends to subside with rest. Gentle exercise to keep the circulation moving, flexing the calf muscles and rotating the ankles, and sitting or lying with the feet raised can all help.

Oedema can be accompanied by high blood pressure and protein in the urine (a possible sign of pre-eclampsia). I see this most frequently in women who are overweight prior to getting pregnant and in women who have had problems conceiving. If there is severe swelling of the hands and feet and any headache, the patient must contact her doctor or midwife as this also could be a sign of pre-eclampsia.

Causes

These include: increased blood volume, hot weather, standing for long periods of time, and carrying twins.

Advice

Patients should be advised to:

1. elevate the feet for 20 minutes, three to four times a day, especially during the peak time for the kidneys, 3 p.m. to 5 p.m.

2. drink between meals rather than with meals
3. lie on the side when sleeping to improve circulation and reduce swelling
4. wear flat shoes and avoid tight shoes or socks
5. remove rings if the fingers are swelling
6. avoid crossing the legs.

Dietary advice

Parsley, onion and garlic are all good circulation tonics, so meals rich in these should be eaten. Choose foods or juices that act as natural diuretics, such as carrots, cucumber, grapes, lentils, legumes, peas, pineapple, seaweed, spinach, watercress and watermelon. Vitamin C also has a mild diuretic action, so increase the intake of C-rich fruits. Avoid ordinary table salt and instead buy a natural form of salt from a healthfood shop.

Treatment with acupuncture

Oedema in pregnancy is difficult to treat because it tends to get worse as the pregnancy progresses owing to the increasing volume of fluids. As it tends to occur in the last trimester, no abdominal points can be treated.

In the Chinese view, oedema is connected to poor diet. Too much raw or cold food in pregnancy can cause oedema by affecting the Spleen Yang, causing a failure of transportation.

Overwork is also thought to affect the Kidney Yang. Emotional factors such as worry, fear and anxiety can all lead to Stagnation of the Qi.

The most common pattern to find is Kidney Yang deficiency and the main treatment is to tonify the Yang. The Kidneys tend to become weaker as pregnancy progresses.

Points to treat

These include:

- BL-23 to tonify Kidney Yang
- KI-3 to tonify the Kidneys
- GV-4 could be used with moxa but only as a last resort.

Other points to use for oedema include:

- BL-20, tonify with moxa if the oedema is caused by Spleen Yang deficiency
- SP-3 tonification
- ST-36 tonification is effective in all cases of oedema.

Carpal tunnel syndrome

Carpal tunnel syndrome is very common in pregnancy. It is caused by compression of the median nerve in the wrist. The symptoms are more common at night and include numbness, tingling and pain in the fingers.

Western medicine usually treats the condition with splints or bandages. Acupuncture works very well but a daily treatment is required. I use PC-5 with the needle angled towards the carpal tunnel, and ST-36, the empirical point of the wrist. Obtain Deqi and leave the needles in with even technique.

Relief is usually given for the first night but the pain returns again next morning. The condition improves spontaneously after the baby is delivered.

Anxiety

Although pregnancy is a normal, physiological life event, impending motherhood can also give rise to a great deal of anxiety, stress and fear. This may be caused by:

- fear of the unknown (in a first pregnancy)
- fear of pain, of having an abnormal baby or of losing control
- fear of repetition of a bad experience (such as a previous induced abortion, a stillbirth, a neonatal death or a bad obstetric experience)
- ambivalence about the pregnancy (which could be caused by a whole range of factors, such as the attitude to the conception, unhappy family circumstances, problems with finances or inadequate housing)
- personal problems (such as breakdown of the relationship with the partner or the death of a family member)
- feelings of ill health
- guilt about failure to give up smoking
- chronic stress (due to a stressful occupation, too much time spent travelling, or not enough time for mental preparation as the end of pregnancy approaches).

Probably the best way to help alleviate fears and anxieties is to provide a woman with a safe environment to talk them through—offering counselling where appropriate.

It is probable that maternal anxiety may increase the perception of pain, increasing the need for pain relief in labour. It may also interfere with normal uterine activity in labour, slowing down contractions. Therefore the more realistic reassurance that can be given to a woman to help her to handle her fears, the better.

Chinese viewpoint of anxiety in pregnancy

Emotional problems such as worry, fear and anger may lead to Qi stagnation (see Ch. 5), which in turn leads to fire, which in turn will affect the mind. Pregnant women suffer a lot from heat and anxiety in pregnancy is often heat related.

Empty-Heat is generally caused by Yin deficiency. Symptoms include mental restlessness, fidgeting, dry mouth, hot flushes and night sweats.

Points to treat

These include:

- CV-15 relaxes the Mind and the chest; use even technique and leave the needles in for 20 minutes
- KI-2 clears Empty-Heat; use even technique
- KI-6 nourishes Kidney Yin, reinforcing tonification
- Point Zero and Shenmen (Auricular points)

If the Liver is affected there will be more irritability and dream-disturbed sleep.

Points to treat

These include:

- LR-2 drains Liver Fire.

Phobias may be caused by Phlegm:

- ST-40 relieves Phlegm
- ST-8 even technique.

Baby not growing

To assess fetal growth, the age of the fetus must be established prior to 24 weeks of pregnancy. Regular abdominal examinations at antenatal visits will assess the height of the uterine fundus. If the baby appears small for its gestational age, an ultrasound scan will give further guidance, and babies that appear to be at risk will be closely monitored. The head circumference and the abdomen will be measured every 4 weeks.

Intrauterine growth retardation is caused by chronic, slowly progressive hypoxia (lack of oxygen), and the fetus will generally show asymmetrical growth patterns. If the hypoxia continues, the fetal organs can begin to fail, the placenta will age rapidly and the renal blood flow will fall, causing decreased amniotic fluid. Lack of oxygen to the central nervous system will lead to decreased fetal and respiratory movements and tone, and a drop in the variability of the fetal heart rate, which will be picked up on a CTG (cardiotocograph) (see Ch. 10).

Another test carried out is Doppler ultrasound, a non-invasive test using a device similar to the one used by midwives to listen to the baby.

Biophysical profiling may also be used, another non-invasive test to check fetal well-being in a fetus that does not appear to be growing. This measures the fetal heart rate, fetal tone, breathing movements and the volume of amniotic fluid. It also measures blood flowing through the umbilical artery.

Fetal distress and retardation of fetal growth are often related to social factors in the mother's profile:

- low socioeconomic status (this is not just a question of income but of education, nutrition, physical health and physique)
- maternal age (young teenagers and mothers over the age of 35 seem to be at higher risk)
- smoking (nicotine leads to decreased uterine blood flow and carbon monoxide reduces the transport of oxygen)
- maternal drug misuse in pregnancy (linked to intrauterine growth retardation, hypoxia, preterm labour and perinatal death)
- overwork—high-powered professional women who continue to work right through their pregnancy without giving themselves any time to rest
- poor obstetric history (previous abortions, preterm labours or stillbirths).

Treatment with acupuncture

In Chinese terms, the reason for the fetus failing to grow would be deficient Blood in the mother or failure of the Kidneys to nourish properly—I always find some form of Kidney deficiency in such cases. This is also common in women who have previously had infertility problems, women with weak constitutions and women who work long hours.

I generally recommend to women that they try and put their feet up for an hour or two during the afternoon, to give themselves a chance to rest.

Points to treat The main points to use are ones that build up the Kidneys, Blood and Spleen:

- BL-17, 20 and 23 to strengthen the Spleen and Kidney and to build up the Blood; use tonification with moxa if there are a lot of Yang signs of the Spleen and Kidney.

On one occasion I used the Directing and Penetrating Vessels with a woman whose baby was very small at 32 weeks. A CTG tracing showed the heartbeat to be slow and the medical staff were anxiously trying to postpone doing a caesarian section. I used PC-6 (left) and SP-4 (right), inserting the needle to get the Deqi and leaving the needles in with even technique for 20 minutes. I also used LU-7 (right) and KI-6 (left). My intention was to try and improve the flow of blood to the placenta. Although this is purely anecdotal evidence, I am pleased to say that the tracing did start to improve while the needles were in.

Premature labour

Premature or preterm labour is defined as that occurring before the end of the 37th week of pregnancy (full term is between 38 and 42 weeks). It is found in between 6 and 10% of births in developed countries, with less than a quarter of preterm deliveries occurring before 32 weeks (Griffin 1993). Preterm birth is responsible for 75 to 90% of neonatal deaths.

Preterm birth may occur as a result of: elective preterm delivery (because of severe pre-eclampsia, maternal renal disease or severe intrauterine growth retardation), premature rupture of the membranes (see below), complicated emergency delivery (placental abruption, eclampsia, Rhesus isoimmunisation, maternal infection, prolapsed cord), or uncomplicated spontaneous preterm labour of unknown cause (the largest group, accounting for up to 40% of preterm births).

There are many risk factors associated with preterm labour (these are not the causes but can help to indicate those women most at risk):

- maternal age (less than 15, more than 35)
- low maternal body weight (less than 50 kg at conception)
- poverty or social deprivation
- marital status (preterm labour is more common in unmarried women)
- maternal employment that involves hard physical work

- psychological distress (emotional disturbance can affect nutritional status)
- heavy metal toxicity in the mother, or zinc/copper imbalance
- cigarette, alcohol or drug abuse
- short gaps between pregnancies
- late antenatal booking and poor attendance for antenatal care
- maternal history of hypertension, renal disease or diabetes mellitus
- maternal viral or generalised infections or genital tract infection
- maternal history of preterm birth
- bleeding in the current or in a previous pregnancy
- uterine abnormality
- failure to gain weight adequately in the current pregnancy
- retained intrauterine contraceptive device
- abdominal surgery
- multiple pregnancy (46 percent deliver pre-term)
- polyhydramnios
- fetal malformation
- rhesus disease
- fetal death.

Prevention of preterm birth depends on preventing uterine activity, or cervical dilation, or both. Bed rest is usually recommended. Antibiotic therapy may sometimes help and skin patches of glyceryl nitrate can be effective at suppressing contractions. Cervical cerclage, carried out under anaesthetic, may be helpful in cases where there is a recognised cervical weakness.

Taking the minerals magnesium and calcium may help to prevent preterm labour.

Treatment with acupuncture

Before treating a patient with an irritable uterus (the term given to a uterus that keeps on contracting and is usually better with rest), with early contractions or preterm labour, it is vital to make sure that Western care is also being given. Anything that acupuncture can do will be in addition to this. Bear in mind also that you may have to see some women at their own homes, as exerting energy to go out for treatment could make the contractions much worse.

From the Chinese viewpoint, preterm labour is caused by a deficiency of Qi and Blood (the same as anaemia). If the cause is Blood deficiency, the solution is to tonify Blood points.

Points to treat

These include:

- BL-17, 20 and 23 to build up the blood; these points are good for Deficiency conditions; heat with moxa and use tonification
- BL-23 and 17; where there is a background of Kidney deficiency then tonification and moxa may be used
- KI-6 and BL-23; use tonification but do not use moxa in cases of Kidney Yin deficiency

Case study 7.1

Vicki has been pregnant seven times (including two miscarriages and twins in her fourth pregnancy). On each occasion she suffered from preterm labour and/or an irritable uterus that kept on contracting, and had to be repeatedly admitted to hospital from 20 weeks on for complete bed rest. Throughout the last three pregnancies, I have given her a weekly treatment from about 8 weeks of pregnancy.

Vicki's main problem is Kidney Yang deficiency, and Blood deficiency.

When the uterus is contracting, I needle the Penetrating Vessel PC-6 on the right side and SP-4 on the left side, as well as LU-7 and KI-6 to ease the abdominal pain and calm any anxiety in the patient. This treatment was really helpful in Vicki's case and I was able to treat her again 3 days later, when I added further points, BL-17 and 23, to tonify and build up her Blood and Kidney energy. On this occasion I used moxa on the points.

In her most recent pregnancy, Vickie was not admitted to hospital until 32 weeks (as opposed to 20 weeks in her previous pregnancies), and she delivered normally at 38 weeks.

Case study 7.2

Annabel was an IVF pregnancy with a history of infertility. She came to me at 24 weeks suffering frequent contractions and an irritable uterus. Problems with contractions are often linked to Kidney deficiency and an excess of heat. However, in Annabel's case, she was also very angry and frustrated by the contractions. She was suffering greatly from back ache and a feeling of heaviness in the abdomen: she felt like the baby was going to drop out. She also had a number of Yin symptoms, such as a dry mouth, thirst and heat at night. Movement made the contractions worse so I treated her at home.

I treated the Girdle Vessel points GB-41 on right side and TE-5 on the left side, PC-6 on the right side and LR-3 on the left side. After obtaining Deqi, I left the needles in for 45 minutes. The aim of the treatment was to calm her anxiety and move her Qi. I finished treatment by tonifying BL-23 and KI-6 to nourish her Yin.

- other points I have found to be useful (here again my evidence is anecdotal) are on the Girdle Vessel; if the Girdle Vessel is deficient, the Spleen, the Liver and the Kidney also become deficient; use GB-41 on the right side and TE-5 on the left side; obtain Deqi and leave the needles in with even technique for 20 minutes.

I feel there is nothing to be lost by treating a woman with acupuncture in preterm labour, and possibly much to be gained (see Case studies 7.1 and 7.2).

Preterm rupture of the membranes

Preterm rupture of the membranes occurs when the fetal membranes (or the amniotic sac) spontaneously rupture before 37 weeks' gestation and before labour commences. The cause is unclear but may be associated with cervical incompetence or genital tract infection. Labour often starts soon after, but if several days elapse without this happening then the uterine cavity and the fetus may be colonised by bacteria, which increases the risk to the fetus. There is also the danger of prolapse of the umbilical cord.

If rupture occurs at home, the woman should be admitted to a hospital with a neonatal unit. Temperature and pulse should be recorded at least twice a day if labour does not start at once, and antibiotics prescribed if there is evidence of infection. It is also important to check for signs of bleeding, in case of placental abruption due to the reduction in liquor volume. Steroids may also be prescribed if the woman is between 24 and 32 weeks, to help promote lung maturity in the fetus and reduce the risk of respiratory disease syndrome at birth.

Different hospitals have different policies about when a woman should go into hospital or not. I have never treated preterm rupture of the membranes with acupuncture because I do not believe it is appropriate to do so.

Nutrition in the third trimester

Although, as detailed in Chapter 3, the baby is growing rapidly during this period, the mother only needs to consume approximately 200 extra calories a day. Any more could lead to excess weight gain that she will find hard to shed later. A balanced diet is recommended, containing plenty of fruit, vegetables, nuts, cereals, seeds, lentils and whole grains—high in fibre, low in fats and sugar. The body's need for protein also increases slightly.

All the main vitamins and minerals are needed. These and their food sources are dealt with in detail in Chapter 3.

So far as the baby is concerned, the mature brain is made up of 60% lipids or fats, particularly 'long chain polyunsaturated fatty acids' or LCPs. The two most important for the development and functioning of the brain are arachidonic acid (AA) and docosahexaenoic acid (DHA) (see Ch. 3).

Summary

- Common problems in the third trimester include: anaemia, cramps, insomnia, abdominal pain, oedema and carpal tunnel syndrome, the baby not growing, anxiety, premature labour and preterm rupture of membranes.
- Acupuncture points during the third trimester include:
 - anaemia*: BL-17 and 15 (Spleen Qi deficiency);
BL-17 and 18, LR-8 (Liver Blood deficiency)
 - cramps*: LR-8
 - insomnia*: ST-36, BL-20, 15 and 17 (Heart and Spleen Blood deficiency);
BL-15 and 23, HT-7 (Heart and Kidney not harmonised)

- abdominal pain*: BL-17 and 20;
plus PC-6 and LR-3 (Liver Qi stagnation), CV-12 and ST-36 (moxa, for Cold)
- oedema and carpal tunnel syndrome*: BL-23, KI-3, GV-4 (with moxa, as a last resort);
plus BL-20 (moxa, for Spleen Yang deficiency), SP-3 and ST-36;
PC-5 and ST-36 (carpal tunnel)
- anxiety*: CV-15, KI-2 and 6, Point Zero and Shenmen;
plus LR-2 (Liver Fire), ST-40 and 8 (Phlegm)
- baby not growing (IUGR)*: BL-17, 20 and 23
- premature labour*: BL-17, 20 and 23 (for deficiency), BL-23 and KI-6 (Kidney Yin deficiency);
plus GB-41 (right) and TE-5 (left).

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