

### **Need for instrumental assistance with forceps or vacuum in the second stage of labour**

This may be required in up to 20-30% of cases, and is usually done for non-reassuring fetal status, prolonged second stage of labour or when the position of the head is not normal. Assistance may also be rendered due to maternal exhaustion or poor maternal effort.

This is performed only in situations where the cervix is fully dilated and the head is judged to be low enough for such assistance. The choice of instrument is largely dependent on operator experience and preference, and the specific characteristics of the labour.

### **Maternal risks**

- Possible increased tears of vulva, vagina and / or anus. Serious tears could increase the risk of faecal or urinary incontinence.
- The attempt to deliver your baby may fail and you may need a Caesarean section. In such event, a Caesarean section may be more difficult because the baby's head is low and may be firmly held in the pelvis.

### **Fetal risks with forceps**

- Commonly, the forceps may bruise the baby's face. Such a bruise would usually disappear within days.
- Rarely, the baby's facial nerve may be bruised which could cause asymmetry of the face. This usually improves over a few days.

### **Fetal risks with vacuum**

- The baby may develop a blood blister on one side of the scalp (cephalohaematoma). This affects only the scalp and does not affect the baby's brain. The blister may take up to eight weeks to resolve.
- The cup may fail to attach or become detached during pulling. Another method may be needed to deliver the baby, usually forceps or caesarean section.
- Rarely, the baby may suffer from intracranial haemorrhage or subgaleal haematoma (bleeding within the brain).

### **Need for Caesarean section in the first or second stages of labour**

This may be required in up to 20% of cases, and is usually done for non-reassuring fetal status (NRFS), poor progress of labour, failed instrumental delivery or excessive bleeding.

### **Common Risks of emergency / Caesarean section (1-10%)**

- **Bleeding** - Excessive bleeding may occur from the uterine or abdominal incision, or if the uterus does not contract well.
- **Infection** - Infection may occur in the abdominal wound, bladder or uterus, and antibiotics would be required in such a scenario. Less commonly, infection of the chest may occur.

### **Infrequent (0.1-1%)**

- **Injury to baby** - Laceration to the baby during entry to the uterus (up to 2%) may occur despite the best efforts of an experienced surgeon. Such lacerations, if they do occur, tend to heal very well.
- **Injury to bladder, ureter and / or intestine** - Injury to such neighbouring organs may occur rarely. If this occurs, further surgery to repair the injury would be necessary.
- **Risks in future pregnancies**
  - Scar rupture - There is a small risk of the uterine scar rupturing during labour if undergoing a trial of vaginal birth in a subsequent pregnancy. There could be serious consequences to the mother and baby if this occurs.
  - Placenta accreta - Rarely, the placenta may grow into the uterine scar in a subsequent pregnancy, and this may result in severe bleeding at the time of delivery, and possible need for hysterectomy (removal of the uterus).

### **Rare (<0.1%)**

- **Thromboembolism** - Blood clots may form in the leg or pelvic veins due to changes of pregnancy and immobility. Prophylactic measures such as leg exercises, early ambulation and the use of low molecular weight heparin would reduce the risk. If this occurs, treatment is necessary to dissolve the blood clots. If the clot dislodges and travels to the lung circulation (pulmonary embolism), this can be life-threatening.

### **Conclusion**

Labour is a very safe procedure in our hospitals. However despite good care by doctors and nurses, complications can and do occur at times.



Obstetrical & Gynaecological Society of Singapore  
www.ogss.net

## **NORMAL LABOUR**

Labour is the process where there are regular painful contractions with progressive thinning and dilatation of the cervix (opening of the uterus / womb). It is an attempt at delivering your baby / babies through the mother's vagina (birth canal).

You can prepare yourself mentally for labour by reading about the onset of labour, the stages of labour, what a normal labour is and the risks of labour including the possible need for forceps / vacuum assisted delivery and Caesarean section.



Endorsed by College of Obstetricians and Gynaecologist, Singapore

### **Onset of labour**

It is difficult to pinpoint the exact onset of labour as the diagnosis of labour is dependent on documenting the thinning and dilatation of the cervix by the doctors or the nurses after usually a few hours of regular painful contractions (usually described as increasingly painful menstrual cramps or intermittent backaches).

Most obstetricians would advise their patients to go to the delivery suite when the painful contractions occur every 5-10 minutes unless the patients have other risk factors.

### **Stages of labour**

There are 3 stages of labour that occur during a vaginal delivery:

- First stage of labour begins with regular painful contractions (usually lasting 20-40 seconds in duration)
  - where the cervix thins and dilates slowly to 3-4 cm (latent phase) over a variable period of 6-48 hours
  - and then more rapidly to 10 cm or fully dilated (active phase) over 6-8 hours on average.
- Second stage of labour begins from the time the cervix is fully dilated and ends with the birth of your baby
- Third stage of labour begins after the baby is born till the placenta is delivered

### **A normal labour**

Your EDD (expected date of delivery) is the date that the pregnancy is 40 weeks. A normal labour usually occurs after 37 weeks of gestation. In the active phase of labour, the cervix tends to open at an average of 1 cm every hour.

For most patients, a normal labour is the preferred method to deliver the baby as it is the most natural, and usually is associated with the fastest recovery and the least potential complications in the next pregnancy.

### **Labour Risks**

Labour is generally a safe procedure and major complications are uncommon. However, there are risks to labour and vaginal delivery. These risks include:

### **Pain during labour**

Pain during labour varies from bearable to very severe. There are non-medical methods of pain relief (e.g. music therapy, concentration on breathing, hypnotherapy, etc) and medical methods of pain relief (e.g. Entonox, Pethidine and Regional Anaesthesia like epidural).

### **Tears in vagina / vulva / anus**

When delivering your baby, there may commonly be tears in the vagina / vulva, and less likely into the anus. The obstetrician may perform an episiotomy, a surgically planned incision at the perineum, during the birth of the baby. These tears / incision will need to be stitched and may be painful. Serious tears could increase the risk of faecal or urinary incontinence. Such tears may be minimized if you perform regular perineal massage from 36 weeks onwards.

### **Bleeding**

You may lose more blood than expected, and may require a blood transfusion or medications / surgery to stop the bleeding.

### **Infection**

Infection may occur in the bladder, perineal tears and uterus.

### **Incontinence**

Occasionally, you may leak urine after delivery. This is usually transient but may rarely persist long after delivery, requiring further treatment by surgery. Rarely, you may leak faeces or gas.

### **Failure of placenta to expel spontaneously and completely**

Manual removal of placenta may be required either in the delivery suite or operating theatre.

### **Retained products of conception**

Occasionally, there may be retained products of conception that may not be evident at birth but yet result in bleeding after delivery several days to weeks after delivery. A surgical evacuation of uterus may be necessary.

### **Non-reassuring fetal status (NRFS)**

During labour, there may be signs of possible stress or distress to the baby such as abnormal changes on the CTG (cardiotocogram) or meconium in the liquor (baby's faecal material present in the amniotic fluid). The membrane may need to be ruptured artificially for purpose of assessing if there is meconium within the liquor.

Depending on the severity of these signs and the judgement of your obstetrician, delivery may need to be accomplished by Caesarean section or instrumental delivery

### **Poor progress of labour**

If the progress of labour is judged to be poor, oxytocin may need to be used to augment the progress of labour. Oxytocin is a natural hormone that increases the frequency and intensity of the uterine contractions. With medical and nursing supervision, the use of gradually increasing doses of oxytocin via an infusion under continuous CTG monitoring is safe.

Possible risks of oxytocin use include:

- hyperstimulation (excessive uterine contractions which may result in non-reassuring fetal status) which could be detected on CTG and acted upon by stopping the oxytocin infusion or administering a drug to transiently stop the uterine contractions
- drop in blood pressure, and nausea or vomiting

If despite the use of oxytocin, the progress of labour persists in being poor, delivery may be accomplished by Caesarean section or instrumental delivery e.g. forceps or vacuum.

### **Injury to the baby**

Infrequently, there may also be difficulties in delivering the shoulder especially if the baby is large which may rarely result in physical injuries to the baby's bones and nerves.

The baby may suffer from brain injury from inadequate oxygen supply in complications despite the best of care from your doctors and nurses. Fortunately this is a rare complication.