Management of labour by Dr. Noor Hazim

#### Management of normal labour

Women are advised to contact their local labour suite or their community midwife if they think their :

- 1-waters may have broken (SROM)
- 2- when their contractions are occurring every 5 minutes or more.
- It is important to recognize that women have very different thresholds for seeking advice and reassurance.
- The need for pain relief may result in admission to hospital before either of these two criteria is reached.
- Whether at home or in hospital, the attending midwife will then make an assessment of the situation based on the history and on clinical examination,
- and the preferences of the woman.

### **OBJECTIVES**

- 1- To learn intrapartrum management
- 2- To identify partogram
- Principles of management
- 1-Initial assessment
- 2-diagnosis and intervention of abnormal labour
- 3-close monitoring of maternal and fetal condition
- 4- adequate pain relief
- 5- adequate hydration
- 6- emotional support

#### Initial assessment

### Define risk :

- 1- Current & pervious pregnancy
- 2-Medical and surgical problems
- 3- Fetal condition
- 4- Degree of monitoring needed
- 5- Level of staff manage the patient

# History

A detailed history should be taken including past obstetric history, history of the current pregnancy, relevant medical history and events leading up to hospital attendance.

- Previous births and size of previous babies.
- Previous caesarean section.
- Onset, frequency, duration and perception of strength of the contractions.
- Whether membranes have ruptured and, if so, colour and amount of amniotic fluid lost.
- Presence of abnormal vaginal discharge or bleeding.
- Recent activity of the fetus (fetal movement).
- Medical or obstetric issues of note
- (e.g. diabetes, hypertension, fetal growthrestriction [FGR]).
- Any special requirements (e.g. an interpreter or particular emotional/psychological needs).
- Maternal expectations of labour and delivery
- Birth preferences or a birth plan

### **General examination**

1- Identify women who have a raised body mass index (BMI), as this may complicate themanagement of labour.

- 2-The temperature, pulse and blood pressure must be recorded
- 3- a sample of urine tested for protein, blood, ketones, glucose and nitrates.

## Abdominal examination

- 1- Initial inspection for scars indicating previous surgery
- 2- It is important to determine the lie of the fetus (longitudinal, transverse or oblique)

3-the nature of the presenting part (cephalic or breech). If it is a cephalic presentation, the degree of engagement must be determined in terms of fifths palpable abdominally. A head that remains high (five-fifths palpable) and unengaged (more than two-fifths palpable) is a poor prognostic sign for successful vaginal delivery. If there is any doubt as to the presentation or if the head is high, an ultrasound scan should be performed to confirm the presenting part or the reason for the high head (e.g. OP position, deflexed head, placenta praevia, fibroid, etc).

4-Abdominal examination also includes an assessment of the contractions; this takes time (at least 10 minutes) and is done by palpating the uterus

- directly, not by looking at the tocograph. The tocograph provides reliable information on the frequency, regularity and duration of contractions, but
- not the strength .
- Vaginal examination
- The purpose and technique of vaginal examinationis explained to the woman and her consent must be

obtained.

- □ Most women find vaginal examinations uncomfortable and every effort should be made
- to maintain the woman's dignity and privacy.
- ✓ The index and middle fingers are passed to the top of the vagina and the cervix. The cervix is examined for position, length and effacement, consistency, dilatation and application to the presenting part.
- 1-The length of the cervix at 36 weeks' gestation is about 3 cm. It gradually shortens by the process of effacement and may still be uneffaced in early labour. The dilatation is estimated digitally inThe dilatation is estimated digitally in centimetres. At about 4 cm of dilatation, the cervix should be fully effaced. Providing the cervix is at least 4 cm dilated . When no cervix can be felt, this means the cervix is fully dilated (10 cm).

2-A vaginal examination also allows assessment of the fetal head position, station, attitude and the presence of caput or moulding. In normal labour, the vertex will be presenting and the position can be determined by locating the occiput. The occiput is identified by feeling for the triangular posterior fontanelle and the three suture lines. Failure to feel the posterior fontanelle may be because the head is deflexed (abnormal attitude), the occiput is posterior (malposition) or there

is so much caput and moulding that the sutures cannot be felt. All of these indicate the possibility of a prolonged labour or a degree of mechanical obstruction. Normally, the occiput will be transverse (OT position) or anterior (OA position).

3-Relating the leading part of the head to the ischial spines will give an estimation of the station. This vaginal assessment of station should always be

taken together with assessment of the degree of engagement by abdominal palpation. If the head isfully engaged (zero-fifth palpable) at or below the ischial spines (0 to +1 cm or more).

- 4-The condition of the membranes should also be noted. If they have ruptured, the colour and
- amount of amniotic fluid draining should be noted. A generous amount of clear fluid is a good
- prognostic feature; scanty, heavily blood-stained or meconium-stained fluid is a warning sign of
- possible fetal compromise.
- 5- Women who are found not to be in established labour should be offered appropriate analgesia and support.

- The admission history and examination provide an initial screen for abnormal labour and
- increased maternal/fetal risk. If all features are
- normal and reassuring, the woman will remain
- under midwifery care.
- If there are risk factors identified, medical involvement in the form of theon-call obstetric team may be appropriate.
- Women in labour should have their pulse measured hourly
- and their temperature and blood pressure every 4 hours.
- The frequency of contractions should be recorded every 30 minutes and a vaginal examination performed every 4 hours (unless other factors suggest it needs to be repeated on a different
- time-frame).
- It should be noted when the woman voids urine, and this should be tested for ketones and protein.
- Women who chose epidural analgesia may need to be catheterized.
  Once the second stage is reached, the blood pressure and pulse should be performed hourly, and vaginal examinations offered every hour also.

### Fetal assessment in labour

- A healthy term fetus is usually able to withst and the demands of a normal labour. However, with each contraction, placental blood flow and oxygen transfer are temporarily interrupted and a fetus that is compromised before labour starts will become increasingly so. Insufficient oxygen delivery to the fetus causes a switch from aerobic to anaerobic metabolism and results in the generation of lactic acid and hydrogen ions.
- In excess, these saturate the buffering systems of the fetus
- and cause a metabolic acidosis, which if prolonged and severe, can cause neuronal damage and permanent neurological injury, even intrapartum fetal death. Hypoxia and acidosis cause a characteristic change in the fetal heart rate (FHR) pattern, which can be detected by auscultation and the CTG.

- Meconium (fetal stool) is often passed by a healthy fetus at or after term as a result of maturation of the gastrointestinal tract. it is usually thin and a very dark green or brown colour. However, it may also be expelled from a fetus exposed to marked intrauterine hypoxia or acidosis. it is often thicker and much brighter green in colour.
- The FHR should be auscultated with a Pinard ,stethoscope, or by using a handheld Doppler
- device, early on in the initial assessment. It should be listened to for at least 1 minute immediately after a contraction. This should be repeated every 15 minutes during the first stage of labour and at least every 5 minutes in the second stage.
- The practice of performing an 'admission CTG' on all womenis no longer recommended; however, a CTG should be performed if there are issues that might complicate labour and delivery. Most of these women will also be advised to have continuous EFM throughout labour

The quality of a CTG recording is sometimes poor because of the fetal position, or maternal obesity. . A FSE may overcome this problem. It is fixed onto the skin of the fetal scalp and picks up the FHR directly. It rarely causes any harm to the fetus but requires a certain degree of cervical dilatation to be applied and for the membranes to be ruptured if they have remained intact. It is contraindicated

in the presence of significant maternal infection (e.g. HIV or hepatitis C).

### The features of a normal FHR pattern include

- a baseline heart rate of between 110 and 160 bpm (averaged over a 20 minute interval or more)
- variability of between 5 and 25 bpm (variation in the FHR above and below the baseline)
- accelerations (a transient increase in FHR of at least 15 bpm lasting at least 15 seconds)
- the absence of decelerations (transient decreasenin the FHR of 15 bpm or more).
  Interpreting the
- CTG in labour is somewhat different to that of an antenatal CTG, particularly in the second stage.
- The absence of accelerations is of uncertain significance during labour, and the presence of early
- or variable decelerations (contemporaneous with contractions) later on in labour is extremely common and not usually a sign of significant fetal compromise.
- Each feature of the CTG (baseline rate, variability, accelerations and decelerations) should be assessed each time a CTG is reviewed. Each feature
- can be described as 'reassuring', 'non-reassuring' or 'abnormal' according to certain strict nationally

#### in the National Institute for Health and Care Excellence (NICE) guideline on intrapartum management.

1-If all four features are reassuring, then the CTG is classified as 'normal'

- 2- If one feature is non-reassuring (and the other three are reassuring), then the CTG is classified as 'suspicious'.
- 3-If there are two or more non-reassuring features, or any one abnormal feature, then the CTG is 'pathological'.
- Any reversible causes must be considered and addressed (e.g. dehydration, mother lying flat) and if it persists, further
- assessment of the fetus is necessary with FBS.
- If this is not possible or safe, then the baby should be delivered without delay. Unfortunately, the CTG can be
- difficult to interpret and it carries a significant falsepositive rate (i.e. it often raises the possibility of fetal
- compromise when in fact the fetus is still in good condition).

### Fetal assessment options in labour

1• Inspection of amniotic fluid – fresh meconium staining, absence of fluid, and heavy blood-stained fluid or bleeding are markers of potential fetal

compromise.

- 2• Intermittent auscultation of the fetal heart using a Pinard stethoscope or a hand-held Doppler ultrasound.
- 3• Continuous external electronic fetal monitoring (EFM) using CTG.
- 4• Continuous internal electronic fetal monitoring using a fetal scalp electrode (FSE) and CTG.
- 5• Fetal scalp blood sampling (FBS).

### Indications for continuous EFM

- 1-Significant meconium staining of the amniotic fluid.
- 2- Abnormal FHR detected by intermittent auscultation.
- 3- Maternal pyrexia (temperature  $\geq$ 38.0°C or  $\geq$ 37.5°C on two occasions).
- 4- Fresh vaginal bleeding.
- 5- Augmentation of contractions with an oxytocin infusion.
- 6- Maternal request.



Figure 12.18 A normal cardiotocograph (CTG), showing a baseline fetal heart rate of approximately 120 bpm, frequent accelerations, baseline variability of 10–15 bpm and no decelerations. The uterus is contracting approximately once every 5 minutes.

### The partogram

- The introduction of a graphic record of labour in the form of a partogram has been an important development.
- This record allows an instant visual assessment of the progress of labour based on the rate of cervical dilatation compared with an expected
- norm, according to the parity of the woman, so that slow progress can be recognized early and appropriate actions taken to correct it where possible.
- Other key observations are entered on to the chart, including the frequency and strength of contractions, the descent of the head in fifths palpable and station,
- the amount and colour of the amniotic fluid draining and basic observations of maternal wellbeing, such as blood pressure, heart rate and temperature

- A line can be drawn on the partogram at the end of the latent phase demonstrating progress of 1 cm dilatation per hour.
- Another line ('the action line') can be drawn parallel and 4 hours to the right of it.
- If the plot of actual cervical dilatation reaches the action line, indicating slow progress, then consideration should be given to a number of different
- measures that aim to improve progress.
- Progress can also be considered slow if the cervix dilates at less than 1 cm every 2 hours.

## Monitoring in labour (recorded on the partogram)

- The FHR should be monitored every 15min (or continuously with a CTG).
- The contractions should be assessed every 30min.
- Maternal pulse should be checked hourly.
- BP and temperature should be checked 4-hourly.
- VE should be offered every 4h to assess progress.
- Maternal urine is tested 4-hourly or when passed for ketones and protein

## Components of the partograph

- Part 1 : fetal condition ( at top )
- Pqrt 11 : progress of labour ( at middle )
- Part 111 : maternal condition ( at bottom )
- Outcome.....:





## Part 1 : Fetal condition

- · this part of the graph is used to monitor and assess fetal condition
- 1 Fetal heart rate
- · 2 membranes and liquor
- 3 moulding the fetal skull bones
- Caput



#### Basal fetal heart rate?

- > 160 beats/mi =tachycardia
- < 120 beats/min = bradycardia
- <100 beats/min = severe bradycardia

Decelerations? yes/no Relation to contractions?

- Early
- Variable
- Late ----Auscultation return to baseline

> 30 sec → contraction
 ---- Electronic monitoring peak and trough (nadir)
 → > 30 sec

# membranes and liquor

•	intact membranesI
•	ruptured membranes + clear liquorC
•	ruptured membranes + meconium- stained liquorM
•	ruptured membranes + blood - stained liquorB
•	ruptured membranes + absent liquorA

# moulding the fetal skull bones

- Molding is an important indication of how adequately the pelvis can accommodate the fetal head
- increasing molding with the head high in the pelvis is an ominous sign of cephalopelvic disproportion
- separated bones . sutures felt easily ......O
- bones just touching each other .....+
- overlapping bones ( reducible 0 .....++
- severely overlapping bones ( non reducible ) .....+++



## part11 - progress of labour

- . Cervical diltation
- · Descent of the fetal head
- · Fetal position
- Uterine contractions
- this section of the paragraph has as its central feature a graph of cervical diltation against time
- · it is divided into a latent phase and an active phase





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# Active phase :



- Contractions at least 3 / 10 min
- each lasting > 40 sceonds
- The cervix should dilate at a rate of 1 cm / hour or faster



# Alert line ( health facility line )

- The alert line drawn from 3 cm diltation represents the rate of diltation of 1 cm / hour
- Moving to the right or the alert line means referral to hospital for extra vigilance

# Action line (hospital line)

- The action line is drawn 4 hour to the right of the alert line and parallel to it
- This is the critical line at which specific management decisions must be made at the hospital

# Cervical diltation

- It is the most important information and the surest way to assess progress of labour, even though other findings discovered on vaginal examination are also important
- when progress of labour is normal and satisfactory, plotting of cervical dilatation remains on the alert line or to left of it
- if a woman arrives in the active phase of labour, recording of cervical dilatation starts on the alert line
- when the active phase of labor begins, all recordings are transferred and start by plotting cervical dilatation on the alert line



### Descent of the fetal head

- It should be assessed by abdominal examination immediately before doing a vaginal examination, using the rule of fifth to assess engagement
- The rule of fifth means the palpable fifth of the fetal head are felt by abdominal examination to be above the level of symphysis pubis
- When 2/5 or less of fetal head is felt above the level of symphysis pubis, this means that the head is engage, and by vaginal examination, the lowest part of vertex has passed or is at the level of ischial spines



# Uterine contractions

- Observations of the contractions are made every hour in the latent phase and every half-hour in the active phase
- frequency how often are they felt ?
- Assessed by number of contractions in a 10 minutes period
- duration how long do they last ?

Measured in seconds from the time the contraction is first felt abdominally, to the time the contraction phases off

· Each square represents one contraction



## Palpate number of contraction in ten minutes and duration of each contraction in seconds

Less than 20 seconds:



B

• Between 20 and 40 seconds:







## Part111: maternal condition

Name / DOB /Gestation

Medical / Obstetrical issues

Assess maternal condition regularly by monitoring :

- · drugs, IV fluids, and oxytocin, if labour is augmented
- pulse , blood pressure
- Temperature
- · Urine volume, analysis for protein and acetone





## Management of first stage of labour:

- First stage of labour is the interval from diagnosis of labour to full dilatation of the cervix.
- One-to-one midwifery care should be provided.
- Additional emotional support from a birth partner should be encouraged.
- Obstetric and anaesthetic care should be available as required.
- Maternal and fetal wellbeing should be monitored.
- Vaginal examinations are performed 4 hourly or as clinically indicated.
- Progress of labour is monitored using a partogram with timely intervention if abnormal.
- Appropriate pain relief should be provided consistent with the woman's wishes.
- Ensure adequate hydration and light diet to prevent

ketosis.

- In the latent phase of labour should be encouraged to mobilize and should be managed away from the labour suite where possible.
- Indeed, they may well go home, to return later when the contractions are stronger or more frequent. Encouragement and reassurance are extremely important. Intervention during this phase is best avoided unless there are identified risk factors. Simple analgesics are preferred over nitrous oxide gas and epidurals. There is no reason to restrict eating and drinking, although lighter foods and clear fluids may be better tolerated.
- Vaginal examinations are usually performed every 4 hours to determin .
- the active phase has been reached (approximately 4 cm dilatation and full effacement). Thereafter, the timing of examinations should be decided by the midwife in consultation with the woman. Four-hourly is standard practice; however, this frequency may be increased if the midwife thinks that progress is
- unusually slow or fast or if there are fetal concerns. The lower limit of normal progress is 1 cm dilatation every 2 hours once the active phase has been reached.
- Descent of the presenting part through the pelvis is another crucial component of progress and should
- be recorded at each vaginal examination.
- Full dilatation may be reached, but if descent is inadequate, vaginal delivery will not occur.

During the first stage, the membranes may be intact, may have ruptured spontaneously or may be ruptured artificially. Generally speaking, if the

membranes are intact, it is not necessary to rupture them if the progress of labour is satisfactory.

Maternal and fetal observations are carried out as described previously and recorded on the partogram. Women should receive one-to-one care

(i.e. from a dedicated midwife) and should not be left alone for any significant period of time once

labour has established.

They should be able to choose birth partners themselves and should be able to adopt whatever positions they find most comfortable. Mobility during labour is encouraged and it is likely that standing upright encourages progress.

Unfortunately, many women adopt a supine position (lying down), especially if there is a need for continuous EFM (i.e. the CTG).

Women may drink during established labour and those who are becoming dehydrated may benefit from intravenous fluids

to prevent ketosis, which can impair uterine contractility.

Light diet is acceptable if there is no obvious risk factor for needing a general anaesthetic and

if the woman has not had pethidine or diamorphine for pain relief, which can cause vomiting.

Shaving and enemas are unnecessary and antacids need only be given to women with risk factors for complications, or to those who have had opioid analgesia

It included one-to-one midwifery care, 2-hourly vaginal examinations, early artificial

rupture of membranes and use of oxytocin augmentation if progress fell more than 2 hours behind the schedule of 1 cm dilatation per hour

### Some causes of poor progress in the 1st stage

- Inefficient uterine activity (power —commonest cause).
- Malpositions, malpresentation, or large baby (passenger).
- Inadequate pelvis ( passage ).
- A combination of two or more of the above.

## Poor progress in the 1st stage Assessment

- Review the history.
- Abdominal palpation, frequency, and duration of contractions.
- Review fetal condition; fetal heart rate and colour/quantity of amniotic fl uid.
- Review maternal condition including hydration and analgesia.
- Vaginal assessment; cervical effacement, dilatation, caput, moulding, position, and station of the head.
  Management
- Amniotomy (artifical rupture of membranes (ARM)) and reassess in 2h.
- Amniotomy + oxytocin infusion and reassess in 2h: this should always be considered in nulliparous women.
- Lower segment CS (if there is fetal distress).
- □ For multiparous women and those with a previous CS an experienced obstetrician should review before starting oxytocin.

#### Management during second stage

If the labour has been normal, the first sign of the

second stage is likely to be an urge to push experienced by the mother. Full dilatation of the cervix should be confirmed by a vaginal examination if the head is not visible. The woman will get an expulsive reflex with each contraction, and will generally take a deep breath, hold it, and strain down (the Valsalva manoeuvre). Women will be guided by their own urge to push; however, the midwife has an important role to play, with advice, support and reassurance if progress is poor. Women should be discouraged from lying supine, or semi-supine, and should adopt any other position that they find comfortable. Lying in the left lateral position, squatting and 'all fours' are particularly effective options.

Maternal and fetal surveillance intensifies in the second stage The development of fetal acidaemia may accelerate, and maternal exhaustion and ketosis increase in line with the duration of active pushing.

Use of regional analgesia (epidural or spinal) may interfere with the normal urge to push,

and the second stage is more often diagnosed on a routine scheduled vaginal examination .

Pushing is usually delayed for at least 1 hour and up to 2 hours

if an epidural is in situ (the 'passive second stage'). However, in all cases the baby should be delivered within 4 hours of reaching full dilatation.



#### Descent and delivery of the head

- The progress of descent of the head can be judged by watching the perineum. At first, there is a slight general bulge as the woman bears down. When the
- head stretches the perineum, the anus will begin to open and soon after this the baby's head will be seen at the vulva at the height of each contraction.
- Between contractions, the elastic tone of the perineal muscles will push the head back into the pelvic cavity.
- The perineal body and vulva will become more and more stretched, until eventually the head is low enough to pass forwards under the subpubic arch.
- When the head no longer recedes between contractions it is described as crowning. This indicates that it has passed through the pelvic floor, and delivery is imminent.
- Vaginal and perineal tears are common
- consequences of vaginal birth, particularly during first deliveries. The 'hands-on' approach has been very popular. As crowning occurs, the hands of the accoucheur are used to flex the fetal head and guard the perineum.
- The belief is that controlling the speed of delivery of the fetal head will limit maternal soft tissue damage; however, there is little evidence to support this practice over the alternative 'hands-off' approach.
- Once the head has crowned, the woman should be discouraged from bearing down by telling
- her to take rapid, shallow breaths ('panting')



### An episiotomy

- is a surgical cut, performed with scissors, which extends from the vaginal fourchette in a mediolateral direction, usually to the right, through the perineum and incorporating the lower vaginal wall.
- It is performed during most instrumental births (ventouse or forceps) or to hasten delivery if there is suspected fetal compromise (e.g. fetal bradycardia).
- It will only accelerate the birth if the head has passed through the pelvic floor, so should not be performed too early.
- It does not help prevent more severe perineal injury involving the anal sphincter and its routine use in normal labour was abandoned some time ago.
- Effective analgesia is required, and this will usually be with infiltration of local anaesthetic if the woman does not have an epidural.



## Delivery of the shoulders and rest of the body

- Once the fetal head is born, a check is made to see whether the cord is wound tightly around the neck, thereby making delivery of the body difficult.
- If this is the case, the cord may need to be clamped and divided before delivery of the rest of the body.
- With the next contraction, there is restitution and external
- rotation of the head and the shoulders can be delivered.
- To aid delivery of the shoulders, there should be gentle traction on the head downwards and forwards until the anterior shoulder appears beneath the pubis.
- The head is then lifted gradually until the posterior shoulder appears over the perineum and the baby is then swept upwards to deliver the body

and legs.

If the infant is large and traction is necessary to deliver the body, it should be applied to the shoulders only, and not to the head.

## Immediate care of the neonate

- After the baby is born, it lies between the mother's legs or is delivered directly on to the maternal abdomen.
- The baby will usually take its first breath within seconds. There is no need for immediate
- clamping of the cord, and indeed about 80 ml of blood will be transferred from the placenta to the baby before cord pulsations cease, reducing the chances of later neonatal anaemia and iron deficiency.
- The baby's head should be kept dependent
- to allow mucus in the respiratory tract to drain, and oropharyngeal suction should only be applied if really necessary. After clamping and cutting the cord, the baby should have an Apgar score calculated at 1 minute of age, which is then repeated at 5 minutes.
- Immediate skin-to-skin contact between mother and baby will help bonding, and promote the further release of oxytocin, which will encourage uterine contractions.

The baby should be dried and covered with a warm blanket or towel, maintaining this contact.

Initiation of breastfeeding should be encouraged within the first hour of life and routine newborn measurements of head circumference, birth weight and temperature are usually performed soon after this hour has elapsed. Before being taken from the delivery room, the first dose of vitamin K should be given and the infant should have a general examination for abnormalities and a wrist label attached for identification.



# Delay in the 2nd stage of labour

Nulliparous women

- Suspected if delivery is not imminent after 1h of active pushing:
- VE should be offered and amniotomy recommended.
- If not delivered in 2h: requires review by obstetrician to consider instrumental delivery or CS.
- Multiparous women
- If delivery is not imminent after 1h of active pushing: requires review
- by obstetrician to consider instrumental delivery or CS.
- Delay in the 2nd stage in a multiparous woman must always raise suspicions of malposition or disproportion.



### Management of third stage

- The third stage is the interval between delivery of the baby and the complete expulsion of the placenta and membranes.
- This normally takes between 5 and 10 minutes and is considered prolonged after
- 30 minutes, unless a physiological approach is preferred.
- Separation of the placenta occurs because of the reduction of volume of the uterus due to uterine contraction and the retraction (shortening) of the lattice-like arrangement of the myometrial muscle fibres.
- A cleavage plane develops within the decidua basalis and the separated placenta lies free in the lower segment of the uterine cavity.
- Management of the third stage can be described as 'active' or 'physiological'.



# Sign s of placental separation

- 1-Apparent lengthening of the cord.
- 2- A small gush of blood from the placental bed.
- 2-Rising of the uterine fundus to above the umbilicus .
- 3- Uterine contraction resulting in firm globular feel on palpation.





Figure 12.20 Signs of separation and descent of the placenta. After separation, the uterine upper segment rises up and feels more rounded.



### Active management of the third stage

1• Intramuscular injection of 10 IU oxytocin, given as the anterior shoulder of the baby is delivered, or immediately after delivery of the baby.

- 2• Early clamping and cutting of the umbilical cord.
- **3** Controlled cord traction .





Figure 12.21 Delivering the placenta by controlled cord traction.



#### A-Active management

- Active management of the third stage should be recommended to all women because high-quality evidence shows that it reduces the incidence of postpartum haemorrhage (PPH) from 15% to 5%.
- When the signs of placental separation are recognized, controlled cord traction is used to expedite delivery of the placenta.
- When a contraction is felt, the left hand should be moved suprapubically and the fundus
- elevated with the palm facing towards the mother.
- At the same time, the right hand should grasp the cord and exert steady traction so that the placenta
- separates and is delivered gently, care being taken to peel off all the membranes, usually with a twisting motion.
- Uterine inversion is a rare complication, which may occur if the uterus is not adequately controlled with the left hand and excessive traction is exerted on the cord in the absence of complete separation and a uterine contraction .
- In approximately 2% of cases, the placenta will not be expelled by this method.



- The placenta will not be expelled by this method.
- If no bleeding occurs, a further attempt at controlled cord traction should
- be made after 10 minutes. If this fails, the placenta is 'retained' and will require manual removal under general or regional anaesthesia in the operating theatre.
- It is now recognized that a modified approach to active management of the third stage may be preferable with delayed cord clamping for between 1 and
- 3 minutes.
- This approach allows autotransfusion of placental blood to the neonate while maintaining the benefit of a reduced risk of PPH.
- It is of particular importance in preterm birth.



### **B-Physiological management**

- Physiological management of the third stage is where
- the placenta is delivered by maternal effort and no uterotonic drugs are given to assist this process.
- It is associated with heavier bleeding, but women who
- are not at undue risk of PPH should be supported if they choose this option.
- In the event of haemorrhage (estimated blood loss >500 ml) or if the placenta
- remains undelivered after 60 minutes of physiological management, active management should be recommended.
- After completion of the third stage, the placenta
- should be inspected for missing cotyledons or a succenturiate lobe. If these are suspected, examination under anaesthesia and manual removal of placental tissue (MROP) should be arranged, because in this situation the risk of PPH is high



- A planned physiological 3rd stage should be changed to active management in the event of:
- Haemorrhage.
- Failure to deliver the placenta within 1h.
- Maternal desire to shorten the 3rd stage.
- Finally, the vulva of the mother should be inspected for any tears or
- lacerations. Minor tears do not require suturing, but tears extending into the perineal muscles (or, indeed, an episiotomy) will require careful repair .



### Care immediately after delivery

- Most complications occur in the first 2h after delivery, including;
- PPH
- uterine inversion
- haematoma formation.
- Usually women are kept in the delivery unit during this time to observe: pulse, BP, temperature, uterine size and contractions, fresh bleeding per vaginum, or painful swelling of the vulva, vagina, or perineum.
- Where there is an increased risk of PPH (e.g. in multiple pregnancy), an oxytocin infusion (40U in 500mL saline) should be given prophylactically for 3–4h.
- Encouragement should be given for skin-to-skin contact as soon as possible and the mother and baby should not be separated for the

1st hour.

- Support should be provided for breast-feeding, which should be

initiated in the 1st hour.

- If there are no complications during these 2h, the mother may then be transferred to the postnatal ward: some women may then go home after a further 3–4h of observation

