

Guideline on induction of labour

1. Introduction

This guideline aims to provide evidence based guidance on induction of labour to make the process more logical, effective and safer. It also aims to empower women undergoing induction of labour.

2. Definition

Induction of labour is defined as initiation of labour by artificial means.

3. General principles

- Induction of labour should be performed only in specialist obstetric units when there is a clear indication that its benefits outweigh risks.
- A senior clinician must make the decision.
- The reason/s should be clearly explained to the patient, who should give her consent.
- Maternal and fetal wellbeing should be monitored closely.
- Adequate pain relief should be an essential part of the management plan, since it is recognized that labour is more painful when it is induced.
- Prior to induction of labour, the cervix should be favourable (Modified Bishop score 7 or more). If it is not, an attempt should be made to ripen the cervix.
- Decisions regarding induction of labour should be made taking into account not only the clinical scenario but also the woman's views, the availability of local facilities and cost effectiveness of the available methods.

4. Indications

4.1 Otherwise uncomplicated pregnancy continuing beyond 40 weeks

Induction of labour is recommended for low-risk women who are known with certainty to have reached 41 weeks of gestation.

However, it is good practice to assess foetal wellbeing around 40 weeks to select women for conservative management until 41 weeks gestation.

The recommended assessments include foetal biometry (at least abdominal circumference) and amniotic fluid index (lower cut-off = 7 cm).

4.2 Prelabour rupture of membranes at term

In the absence of evidence foetal compromise or maternal infection delayed induction of labour after 24 hours is acceptable.

This may be carried out using either oxytocin infusion or prostaglandins.

4.3 Preterm prelabour rupture of membranes (PPROM)

Patients with PPRM without evidence of infection or fetal compromise should be offered induction after the completion 34 weeks.

4.4 Intrauterine death

This is a very traumatic time for the woman. Most women would want to be delivered as early as possible and their wishes need to be respected.

Amniotomy and repeated vaginal examinations are best avoided.

Prostaglandins are preferred for induction of labour in these women.

Amniotomy is preferred in the presence of abruption placentae.

4.5 History of precipitate labour

There are no studies comparing outcomes in induced versus spontaneous labour.

4.6 Suspected macrosomia

In the presence of good clinical and ultrasound evidence of macrosomia or a history of previous shoulder dystocia, there should be a low threshold for early induction of labour.

4.7 Fetal growth restriction

The decision for induction of labour in a growth-restricted fetus should be individualized based on period of gestation at onset, presence or absence of fetal compromise.

4.8 Older mothers

There is growing evidence that the risk of stillbirth is higher in older (>40 yrs) women near term.

Women over 40 years should be offered induction between 39-40 weeks.

5. Induction under specific circumstances

5.1 Breech presentation

Presentation per se, is not a contraindication to induction.

5.2 Previous CS

There is no contraindication to induction of labour in a woman with a past caesarean section.

Use of either oxytocin or prostaglandins increases the risk of scar dehiscence or rupture.

This risk may be lower with artificial separation of membranes or Foley catheter.

6. Methods of induction

This section does not make a distinction between methods of ripening the cervix and induction of labour.

6.1 Mechanical

There is good evidence that artificial separation of membranes reduces the need for formal induction. This method is recommended to be performed with due regard to asepsis, at 40 weeks gestation.

Where the cervix will not admit a finger, massaging around the cervix in the vaginal fornices will have a similar effect.

Extra-amniotic balloon catheter is an effective method of ripening of the cervix. A Foley catheter is inserted through the cervix and the balloon inflated with 40 - 60 ml of saline. This may be left in situ for a maximum of 48 hours. Following its removal, induction of labour may be proceeded to using another method.

In the presence of evidence of infection, artificial separation of membranes and extra-amniotic Foley catheter must not be used.

6.2 Surgical

Amniotomy is a definitive mode of induction of labour. It should be undertaken only if one is committed to delivery within 24 hours. Therefore it should be done only when the cervix is ripe and prior cervical assessment by an experienced clinician is essential.

The risk of cord prolapse should be appreciated and steps taken to minimise or to recognize it early.

Amniotomy alone may be capable of initiation of labour and it is recommended that oxytocin be started after a period of observation of at least two hours.

6.3 Pharmacological

6.3.1 Oxytocin

Use of oxytocin when membranes are intact is not recommended.

For details of how to use oxytocin please refer to the guideline on oxytocin

6.3.2 Prostaglandins

Prostaglandin E2 (PGE2)

These are very effective in inducing labour and are available as vaginal gel, tablet or controlled release pessary.

All preparations carry a risk of hyperstimulation.

Intracervical route does not offer any increase in efficacy.

Combined use with oxytocin is particularly dangerous. A minimum of six hours from the last vaginal tablet/gel should be allowed before oxytocin is started.

Prior to use of prostaglandins the Bishop score should be assessed and the woman should be monitored electronically to determine the fetal condition and frequency of contractions.

After administration the fetal heart should be monitored electronically when contractions begin. After confirmation of normal heart rate pattern monitoring should be done by intermittent auscultation.

A second dose may be considered after a minimum interval of 6 hours after the first, depending on the change of Bishop score, the condition of the fetus and frequency of contractions.

The dosages are 3 mg for vaginal tablets and 0.5 mg for vaginal gel.

Misoprostol

This drug is widely used worldwide for a variety of indications in pregnancy. (In Sri Lanka, it is not licensed at present).

Nevertheless, it is very effective in inducing labour (more than PGE2), especially in mid trimester fetal death.

Sensitivity of the uterus increases markedly with advancing pregnancy.

This guideline recommends that **it should not be used for induction of labour with a mature live fetus.**

6.3.3 Mifepristone

It is a powerful anti-progesterone and is very useful as an adjunct to misoprostol in cases of intrauterine death. (It is not licenced in Sri Lanka at present).

7. Complications

7.1 Hyperstimulation

This is a well-recognized complication of induction of labour with pharmacological methods. It could have serious consequences including rupture of the uterus, amniotic fluid embolism, precipitate labor and fetal compromise.

It is defined either as a contraction free interval of less than sixty seconds and/or contractions lasting more than ninety seconds.

If diagnosed, the prostaglandin tablet must be retrieved from the vagina or oxytocin infusion stopped immediately and a rapid infusion of 0.9% sodium chloride via a fresh giving set administered.

If still not resolved, tocolytics should be given if available e.g. terbutaline 250 µg IV or SC. Since this is not available in Sri Lanka, salbutamol inhaler may be tried.

7.2 Cord prolapse

This is more likely with amniotomy when the head is high and poorly applied to the cervix.

Precautions to avoid and to detect this early include palpation for cord presentation, palpation for the cord immediately after amniotomy and the fetal heart sounds auscultated immediately afterwards.

If cord prolapse is diagnosed help must be called for immediately. Assess cervical dilatation and effect delivery if fully dilated. If not fully dilated and cord pulsations are present, insert a Foley catheter into the bladder and fill it with 500 ml saline. Place the mother in the knee-elbow position and displace the presenting part away from the pelvis by keeping pressure inserting a hand in the vagina. Transport for immediate caesarean section in this position.

7.3 Uterine rupture

Please also refer to section 6.2 in this guideline.

Extra care must be exercised in grandmultipara and in women with scarred uteri.

7.4 Failed induction

Failed induction is defined as labour failing to start after one cycle of treatment with medical methods or for 12 hours of amniotomy.

It does not necessarily indicate caesarean section in case medical or mechanical methods.

The clinical situation (maternal and foetal condition) must be reassessed and discussed with the woman.

In case of failure to induce labor using one cycle of prostaglandins another cycle may be administered as described as above. Depending on the clinical situation it is best that the second cycle is delayed for 24 hours. In case of amniotomy, failed induction of labour indicates caesarean section.