Medical Induction of Labour

Summary of the Alberta Clinical Practice Guidelines, July 1999 2006 Update

General

- Induction should be undertaken only after a full clinical evaluation including: confirmation of parity, gestational age (by early ultrasound for unsure LMP or routine ultrasound at 18 - 20 weeks), presentation, pelvic adequacy, cervical dilation, effacement and consistency, uterine activity, fetal heart rate (FHR) and non-stress test
- Indication for induciton should be documented and informed consent obtained
- Assess cervical ripening, if Bishop score of ≤ 6 (below) use mechanical or pharmacological ripening agent.

INDICATIONS FOR LABOUR INDUCTION

- gestational hypertension
- alloimmune disease at or near term
- term, pre-labour rupture of membranes
- maternal medical conditions (e.g., insulin dependent diabetes, renal disease, cardiac conditions)
- gestation ≥ 41 + 1/7 weeks
- evidence of fetal compromise
- intrauterine growth restriction
- intrauterine fetal death or history of in prior pregnancy
- chorioamnionitis
- logistic factors (e.g., history of rapid labour, distance from hospital)

CONTRAINDICATIONS FOR LABOUR INDUCTION

- malpresentations (e.g., transverse or oblique lie, footling breech)
- absolute cephalo-pelvic disproportion
- placenta previa
- previous major uterine surgery or classical Caesarean section
- invasive carcinoma of the cervix
- cord presentation
- active genital herpes
- gynecological, obstetrical or medical conditions that preclude vaginal delivery
- convenience

CAUTIONS IN LABOUR INDUCTION

- grand multi-parity (greater than 4)
- vertex not fixed in the pelvis
- unfavourable or unripe cervix (cervical ripening prior to administration of oxytocin)
- brow or face presentation
- over distension of uterus (polyhydramnios or multiple pregnancy)
- lower segment uterine scar (extreme caution)
- pre-existing hypertonus
- prior history of difficult labour and/or traumatic delivery

BISHOP'S PREINDUCTION CERVICAL SCORE SYSTEM

	SCORE			
	0	**1**	**2**	**3**
Dilation of cervix in cm	0	1-2	3-4	5-6
% of effacement **OR** Length of cervix in cm	0 - 30% **OR** ≥ 4 cm	40 - 50% **OR** 3 cm	60 - 70% **OR** 2 cm	80%+ **OR** ≤ 1 cm
Consistency	Firm	Medium	Soft	
Position	Posterior	Mid cavity	Anterior	
Station (in cm above or below ischial spines)	-3 cm	-2 cm	-1 cm to 0 cm	+1 to +2

For complete guideline refer to the TOP Web Site: www.topalbertadoctors.org
Revised Jan 2006

Toward Optimized Practice

Alberta Clinical Practice Guidelines

Administered by the Alberta Medical Association

MEDICAL INDUCTION OF LABOUR continued

Delivery of Care

- Consider:
  - anticipated difficulties with transport in labour if access to a cesarean section is not available at the point of care
  - the availability of adequately equipped labour and delivery area with appropriate resuscitation equipment and personnel
  - the availability of appropriately trained labour and delivery nursing staff to monitor FHR and uterine contractions throughout induction
- Assess fetal well-being immediately prior to initiating induction
- A tocolytic agent[2] must be available in the event of uterine hyperstimulation[1]

Prostaglandins

- There should be fetal heart rate and uterine activity monitoring for a minimum of 30 minutes after insertion
- Outpatient induction of labour with intravaginal controlled release PGE_2 may be a reasonable option for slected low risk women
  - stress that careful instructions for follow-up and awareness of signs of hyperstimulation[1] are important

Cervidil may be preferred in outpatient inductions as it can be easily removed by the mother

- PgE_2 products should not be administered simultaneously with oxytocin

An intravenous infusion of a crystalloid solution using an adequate sized intracath, is started at a site that allows mobility of the patient's arm.

Oxytocin

- Oxytocin should not be initiated for at least 6 hours after the last prostaglandin or for at least 30 minutes after removal of Cervidil insert
- The lowest possible effective dose of oxytocin should be used
  - start the infuson at 0.5 to 2.0 mU/minute
- Prior to any increase in dosage, uterine contractions should be assessed.
  - recommend incremental increase of 1 to 2 mU/min every 30 to 60 minutes
  - maximum of 20 mU/min. This dose should not be exceeded without an evaluation by a physician

Induction of Labour Risks

Intrauterine Resuscitation Measures

- Stop oxytocin infusion
- Remove Cervidil and as much PGE_2 gel as possible
- Reposition to side
- Give O_2 per mask @ 10 L/min
- Notify responsible physician
- Initiate IV and consider increasing fluids (dependent on maternal condition)
- Administer a tocolytic agent as per hospital protocol/regime[2].
- Prepare for possible cesarean delivery if fetal heart pattern remains non-reassuring

Notes

1. *Uterine hyperstimulation (6 or more contractions in 2 consecutive 10 minute windows, or contractions lasting greater than 120 seconds) with fetal heart decelerations/abnormalities is a potential risk with the medical induction of labour*
2. *As a tocolytic agent the SOGC, August 2001, suggest: Nitroglycerine 50 to 200 ug subcutaneously or intravenously, or one to two meter dose (400-800ug) of sublingual nitroglycerine spray.*