Induction Of Labor lecture 1

Objectives

At the end of this Class , you should be:

- Aware of the indications and contraindications for induction of labor
- Aware of the different methods of induction of labor
- Able to select the appropriate method of labor induction for an individual patient.

Induction of labour

- An intervention designed to artificially initiate uterine contractions leading to progressive dilatation and effacement of the cervix.

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Indications for induction of labor:

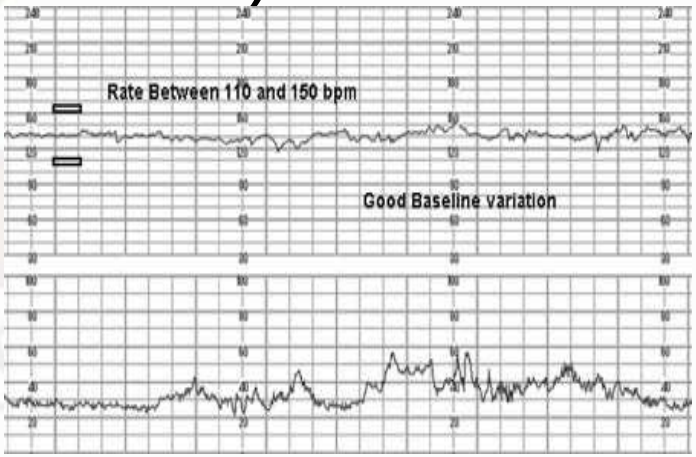
- Maternal indications
- Post-term (main indication]
- P.I.H (Timing depend)on the[severity]
- Diabetes Mellitus (increase risk
- of baby loss and mortality rate)
- Medical conditions (as renal, respiratory and cardiac diseases)
- Placenta insufficiency (as moderate or sever placenta abruption but commonly C.S)
- Prolonged pre-labor rupture of membranes.
- Rheuses isoimmunization.
- Maternal request.

Indications for Induction of Labor cont..

- Fetal Indications:

- Suspected fetal compromise (I.U.G.R)

- Intrauterine death (I.U.F.D).



Contraindications

- Placenta previa and vasa previa
- Abnormal fetal lie / presentation. e.g. transverse lie and breech presentation
- Umbilical cord prolapse and fetal distress
- Previous classical Cesarean section or other transfundal uterine surgery
- Active herpes infection
- Pelvic structural abnormality
- Invasive cervical cancer
- Contraindicaton specific to the inducing drug used.

Augmentation of labor:

- Is refers to intervention to correct slow progress in labor.

- Correction of ineffective uterine contraction includes Amniotomy and/or Oxytocin infusion.

Criteria Before Induction

- Sure estimation of weeks of gestation.
- Evidence of fetal maturity.
- Absence of cephalopelvic disproportion.
- An engaged head in longitudinal lie.
- Cervix is ready for delivery.
- High score Bishop's score.

Induction with caution

- Multiple pregnancy.
- Hydraminos.
- Grand parity.
- Maternal age of >35years.
- Previous cesarean section.

*Those conditions are at risk for ruptured of uterus.

The Bishop score

Bishop score is producing a scoring system to quantify the state of readiness of the cervix and fetus. High scores (a favourable cervix) are associated with an easier shorter induction.

CERVIX	SCORE			
	0	1	2	3
Dilatation of cervix	0	1--2	3--4	5 or more
Consistency of cervix	Firm	Medium	Soft	------
Length of cervix	> 2	2--1	1-0.5	<0.5
Position of cervix	Posterior	Mid	Anterior	------
Station of presenting part	-3	-2	-1…0	+1--+2

Methods of Induction of Labor:

- Natural Non Medical Methods
- Mechanical Methods
- Surgical methods
- Pharmacological Methods

Natural-Non Medical methods

1 **Relaxation techniques:** advise patient to relieve tension and try to relax then use some visual aids to show how labor start

2 **Visualization:** The patient is advised to imagine her uterus contracting and she is laboring. Hypnosis/self-hypnosis helps.

3 **Walking:** The force of gravity pulls the weight of the baby towards the birth canal leading to dilatation and effacement of the cervix.

I-Natural-Non Medical methods (Cont.)

4 **Sex:** Having sex is known to induce labor. This is related to prostaglandin content of the seminal fluid and the occurrence of orgasm which stimulate uterine contractions

5 **Nipple stimulation:** The lady moves her palm and applies some pressure in a circular fashion over her areola and massaging nipple between thumb and forefingers for a period of 2 minutes alternating with 3 minutes of rest. The procedure is performed for 20 minutes. If adequate contraction pattern is not achieved, massaging was done for 3 minutes alternating with 2 minutes rest for additional 20 minutes. Care should be taken to avoid massaging during a contraction and to only massage one side at a time in order to avoid hyperstimulation.

I-Natural-Non Medical methods (Cont.)

5-Acupressure:

Few health personnel claim an association between some acupressure points in the body and increased uterine contractions. One point is located deep in the webbing between thumb and forefinger. Massaging this point in a circular motion for 1-5 minutes stimulates labor pain and induce labor. (Reference 1 - Evidence level B, systematic review of non-RCTs)

II-Mechanical methods

1-Hygroscopic dilators

They absorb endocervical and local tissue fluids, causing the device to expand within the endocervix and provide mechanical pressure. These dilators are either natural osmotic dilators (e.g., Laminaria japonicum) or synthetic osmotic dilators (e.g., Lamicel).

Advantages: 1- Outpatient placement 2- No need for fetal monitoring

Risks: fetal and/or maternal infection

II-Mechanical methods (Cont.)

1-Hygroscopic dilators:

Technique of insertion:

-The perineum and vagina are sterilized with antiseptic sol & the patient is drapped.

-Using a sterile speculum, the dilator is introduced into the endocervix.

-Dilators are progressively placed until the endocervix is full.

-A sterile gauze pad is placed in the vagina to maintain the position of the dilators.

II-Mechanical methods (Cont.)

2- Placement of Balloon Dilators after 42 weeks gestation:

A fluid filled balloon is inserted inside the cervix. The Balloon provide mechanical pressure directly on the cervix which respond by ripening and dilation. A Foley catheter (26 Fr) or specifically designed balloon devices can be used.

Technique of balloon placement:

1- After sterilization and draping, the catheter is introduced into the endocervix either by direct visualization or blindly by sliding it over fingers through the endocervix into the potential space between the amniotic membrane & the lower uterine segment.

II-Mechanical methods (Cont.)

The balloon is inflated with 30 to 50 mL of normal saline and is retracted so that it rests on the internal os.

3 Constant pressure may be applied over the catheter. e.g. a bag filled with 1 L of fluid may be attached to the catheter end. An intermittent pressure may also be exerted on the catheter end 2 -4 times per hour.

4 Catheter is removed at the time of rupture of membranes or may be expelled spontaneously which indicate a cervical dilataion of 3-4 Centimeter.

(References 2-6 - Evidence level B, systematic review of non-RCTs)

Bibliography

1.Text book of obstetrics by D.C.Dutta,8th edition, Published by jaypee Brothers

2.JB Sharma" midwifery and Gynecological nursing" 1st edition,2015, published by Avichal publishing house

3. William Obstetrics, 24th Edition

Thank you!