Improvements in the quality of antenatal care, from 1950s; labour is currently induced in about 13 percent of live births in the United States. Most labour inductions are for postdate pregnancy which occurs in about 10 percent of live births. Intrapartum nurses bear significant responsibility for assessing, supporting, documenting, and verbally communicating labour progress to birth attendants, families, and the women themselves. Contemporary research allows for a wider range of normal labour progress than in the past. Reduction in the rate of primary cesareans is needed to improve maternal and neonatal outcomes. Application of the contemporary evidence on induction of labour is an important aspect of the challenge being faced, to translate the evidence into practice.

Key words: Induction, Intrapartum, Contemporary, Maternal outcome.

Introduction:
Induction of labour is the artificial initiation of labour before its spontaneous onset to deliver the fetoplacental unit. The frequency of induction varies by location and institution. The rate of induction in Canada has increased steadily from 12.9% in 1991–1992 to 19.7% in 1999–2000. The rate reached a high of 23.7% in 2001–2002, decreased slightly to 21.8% in 2004–2005, and has since remained steady. When induction is considered for appropriate reasons, and by appropriate methods, induction is useful and benefits both mothers and newborns (2). The goal of induction is to achieve a successful vaginal delivery that is as natural as possible. Women who are having or being offered induction of labour should have the opportunity to make informed choices about their care and treatment in partnership with their health care provider.

Indications:

- Postdate pregnancy
- Premature rupture of the membranes
- Pregnancy-induced hypertension or preeclampsia
- Chorioamnionitis
- Severe intrauterine fetal growth retardation
- Significant maternal medical problems, such as diabetes mellitus with pregnancy at term

Contraindication

- Prolapsed umbilical cord.
- Prior classic uterine incision.
- Previous bony malpresentation.
- Active genital herps infection
- Contracted pelvis
- Abnormal fetal heart rate.
- Multifetal gestation.
- Placenta previa & vasoprevia
- Malpresentation

Pre induction assessment:
The goal of labour induction is to achieve a successful vaginal delivery, although induction exposes women to a higher risk of a Caesarean section than spontaneous labour. Before induction,
there are several clinical elements that need to be considered to estimate the success of induction and minimize the risk of Caesarean Section7. Factors that have been shown to influence success rates of induction include the Bishop score, parity (prior vaginal delivery), BMI, maternal age, estimated fetal weight, and diabetes. The Bishop score was modified in 1974 as a predictor of success for an elective induction. The initial scoring system used 5 determinants (dilatation, length, station, position, and consistency) that attributed a value of 0 to 2 or 3 points each (for a maximum score of 13). Bishop showed that women with a score of > 9 were equally likely to deliver vaginally whether induced or allowed to labour spontaneously. Favourable induction Bishop score of > 6 is predictive of a successful vaginal delivery. Assessment of cervical status is fundamental for the clinician to estimate the likelihood of a successful vaginal delivery. Of the Bishop score criteria for predicting successful induction, the most important is cervical dilatation, followed by effacement, station, and position, with the least important being consistency. The rate of failed induction is higher for women with a very low Bishop score (0 to 3) in both nulliparous and parous women5,6.

Modified Bishop Score11,12:

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Contemporary Approaches in Induction of Labour:

There are a number of ‘alternative’ or ‘natural’ induction methods available here. Trying to force the mother/baby to do something it is not ready to do is an intervention whether it is with medicine, herbs, therapies, techniques... or anything else. Instead, use only the one that can have unwanted effects and consequences. However, ‘interventions’ (massage, acupuncture, etc.) that are aimed at relaxing the mother and fostering trust, patience and acceptance may assist the mother/baby to initiate labour if the physiological changes have already taken place. Numerous nonmedial methods for cervical ripening and labor induction have been employed. Although popular with midwives, most are not routinely used by obstetricians.

1. Exercise: Walking, of all other physical activities, can help to induce labour naturally. When you walk, be upright so that the head of the baby presses on the pelvic area, precisely on the cervix. This pressure stimulates the release of oxytocin, that helps in progression of labour. Walking can help the baby take the head-down position to initiate natural birth, due to the effect of gravity.

2. Nipple Stimulation: Pulling on the nipples very firmly in a motion intended to simulate a baby's suckling stimulates uterine contractions and has been used to induce labor. It usually works within about 72 hours in women with favorable cervix on Bishop scoring. Breast stimulation causes the uterus to contract, likely through increased levels of the hormone oxytocin, which stimulates contractions. It is typically recommended to be done manually for about 30 minutes at a time on one or both nipples, repeated twice daily. There is little data on safety but it does not appear to be associated with any complications. Safety has not been evaluated in high-risk pregnancies. A plus is that nipple stimulation is associated with reduced postpartum hemorrhage.

3. Belly massage: There is a need for an expert to perform this massage to jump-start the process of labour. In India, many massage therapists practice belly massage that could initiate labour naturally, especially if the cervix is already ripened. Massaging specific points on the belly helps release oxytocin.

4. Eating tropical fruits: There is a reason why pregnant women are advised against consuming pineapple, mango and papaya during pregnancy. These fruits contain a proteolytic enzyme called bromelain that can bring in labour. However, when one has crossed the expected due date, consuming such fruits makes total sense. The enzyme contained in such fruits helps to soften the cervix and initiate labour. The flipside is that there is no evidence that this process works and is safe for pregnant women. Instead, keep a few cups of milk, and 1-2 cups of this milk, if she has crossed her due date. How castor oil helps to induce labour is not known completely but the oil acts as a laxative for sure. Apart from that, it can also give rise to symptoms like nausea and vomiting.

5. Spicy foods: It is believed that having spicy foods just before labour can help in diluting, induce uterine contractions and help in smooth, trouble-free labour, however, this traditional belief isn't scientifically proven yet. Gorging on spicy foods during the expected delivery day, when contractions have not set in, could possibly irritate the intestine and hence cause the uterus to contract.

6. Dance therapy: Belly dance during pregnancy is a good choice. It is a fun exercise for pregnant women and keeps the hormonal and energy levels in check. Practicing some moves can help to induce labour. The reason being, swaying of ‘hips and belly will help the baby turn into the head-down position and press on the cervix to help it dilate naturally. Avoid any vigorous moves that can harm the baby or lead to fetal distress.

7. Herbal tea: Herbs, especially blue cohosh and cotton root bark are popular among midwives, including certified nurse midwives, to stimulate labor. They are typically used in the form of alcohol extracts, taken in doses of several milliliters at a time, repeated up to 4 times/day, or more often under skilled guidance. Thus the use of herbs to induce labor should preferably be done under the guidance of a midwife or other reliable health professional skilled in the use botanical medicines in pregnancy.

8. Consumer castor oil: Castor oil is considered to be a natural element in inducing labour. Many practitioners also advise pregnant women to consume small quantities of the oil mixed with milk, if she has crossed her due date. How castor oil helps to induce labour is not known completely but the oil acts as a laxative for sure. Apart from that, it can also give rise to symptoms like nausea and vomiting.

9. Acupuncture and Acupuncturist: Acupuncture is the application of pressure usually using the找准 points, in place of needles, on acupuncture points. Firm pressure is applied for several minutes, repeated several times daily. Acupuncture has been used to ripen the cervix and induce labor. It is a harmless method if clean needles and proper techniques are used.

These are alternative therapies that many people resort to, induce labour naturally. In acupuncture, specific points in the body are stimulated to initiate uterine contractions, while in acupuncture, needles are inserted on specific points of the body that could initiate labour.

10. Massage with primrose oil: Evening Primrose Oil has been used extensively by midwives to ‘ripen’ the cervix when taken in doses of about 1500 mg orally and the oil of several opened gel caps also applied directly to the cervix for up to a week prior to when you hope to go into labour.

Massaging the perineum with evening primrose oil can help the cervix to loosen and dilate. However, avoiding using this herb and herb extract if pregnancy is considered as a high-risk one.

11. Homeopathy: This can pose to be the safest to induce labour naturally. Homeopathy drugs can help to set in uterine contractions when prescribed by a registered homeopath. These drugs usually have no side-effects. However, their efficiency is not proven yet.

Safe Care Practices for Labour Induction:

Intrapartum nurses bear significant responsibility for assessing, supporting, documenting, and verbally communicating labour progress to birth attendants, families, and the women themselves.

- No elective labor inductions before 39 completed weeks of Gestation
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5. Spicy food: It is believed that having spicy foods just before labour can help in dilation, induce uterine contractions and help in smooth, trouble-free labour, however, this traditional belief isn’t scientifically proven yet. Gorging on spicy foods during the expected delivery day, when contractions have not set in could possibly irritate the intestine and hence cause the uterus to contract.

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Raspberry leaf tea can do wonders during labour. Sipping on raspberry tea during labour can help to dilate the cervix and strengthen the entire pelvic area. It is packed with vital minerals and vitamins and plays a key role in initiating the labour process. It may be taken in a strong tea, prepared using ¼ oz. (about 4 grams) of the dried herb to 1 pint of water, steeped for 20 minutes, and several cups taken daily until labour commences. It is not associated with causing preterm labor and has been associated with decreased complications at birth for the mother and baby.

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EMERGING AND RE-EMERGING DISEASE


Abstract

The spectrum of infectious disease is changing rapidly in conjunction with dramatic societal and environmental changes. Worldwide, explosive population growth with expanding poverty and urban migration is occurring; international travel and commerce are increasing; and technology is rapidly changing, all of which affect the risk of exposure to infectious agents. Infectious diseases are emerging, re-emerging, and increasing in the United States, taking a toll in both morbidity and mortality. A major cause of the emergence of new diseases is environmental change (for example, human encroachment into wilderness areas and increased human traffic through previously isolated areas). The re-emergence of some diseases can be explained by the evolution of infectious agent (for example, mutations in bacterial genes that confer resistance to antibiotics used to treat the diseases). In partnership with representatives from health departments, other federal agencies, medical and public health professional associations, and international organizations has developed a strategic plan to address emerging infectious disease threats. The plan contains four goals that emphasize surveillance, applied research, prevention and control, and public health infrastructure. To ensure sustainability, plan implementation will be approached in stages, as a long-term endeavor with emphasis on extramural programs. As health-care reform proceeds priority should be given to strengthening partnerships between health-care providers, microbiologists, and public health professionals to detect and control emerging and re-emerging infectious diseases.

Key words: emerging, environment, infectious disease

Introduction

Infectious diseases are dominant public health problem even in the 21st Century and world’s leading cause of death for children and adolescents. WHO estimates 25% of the total 57 million annual deaths that occur worldwide are caused by microbes and this proportion is significantly higher in the developing country. In 1997, WHO formulated world health day theme focusing on these issue as “Emerging Infectious Diseases- Global Alert: Global Response”.

The burden of morbidity and mortality associated with infectious diseases falls most heavily on people in developing countries, and particularly on infants and children (about three million children die each year from malaria and diarrheal diseases alone). Emerging & Re-emerging zoonotic diseases, food borne and waterborne diseases & diseases caused by multi resistant organism constitute the major threats in India. In the first half of 2014, Ebola caused over 200 deaths in West Africa and over 500 people contracted Middle East Respiratory Syndrome (MERS). There were more than 145 fatal cases of MERS.

There has been a remarkable progress in the prevention, control and even eradication of infectious diseases (Smallpox) with improved hygiene & development of antimicrobials and vaccines. However, tragically, with optimism came a false sense of security, which has helped many diseases to spread with alarming speed.