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Editorial

Reviving the Art of Obstetrics

Science of Obstetrics is more of an art, and this art is being increasingly forgotten today. Young obstetricians are shying away for practicing this art in favour of Caesarean Section (CS). It has been reported that the CS rate has increased in United States to 32% [1], Canada to 22.5% [2] & United Kingdom 23.8% [3]. A study by the Indian Council of Medical Research (ICMR) in 33 tertiary care institutions noted that the average caesarean section rate increased from 21.8% in 1993–1994 to 25.4% in 1998-1999 including 42.4% primigravidas resulting into a proportionate increase in repeat CS [4]. The WHO recommends that a CS rate of more than 15% is not justified. Even though today CS is safer than it was 30 to 40 years ago, WHO 2005 global study reported a higher rate of CS was associated with greater risk of maternal and perinatal mortality & morbidity compared to vaginal delivery.[5] This fact is often forgotten today in favour of fetal health and survival. Hence, there is a need to reduce CS rate and maternal mortality rate all over the world which can be achieved by reviving the art of obstetrics i.e. reviving art of forceps, vaginal breech delivery, external cephalic version, vaginal birth after caesarean section (VBAC) and symphysiotomy.

Obstetrical forceps are used world wide since over four centuries. Egyptian, Greek and Persian writing and pictures with forceps indicates that originally forceps was used for extraction following fetal demise to save the mother's life. Peter Chamberlin of England (Circa 1600) invented the precursor of the modern forceps which was used for live fetus. However, in current obstetric practice because of inadequate training and fear of litigation forceps is becoming a dying art. The American College of Obstetrics & Gynaecology [6] and Royal College of Obstetrics & Gynaecology [7]said that forceps delivery remains an acceptable and safe option for delivery. In spite of this, recent data from the United States reported a total forceps rate of only 1.6% in which about 1/3 (0.6%) were unsuccessful. This suggests experience and skill with forceps have become difficult to obtain. Residents are no longer taught this technique and senior obstetricians are doing it less & less. Therefore, retraining the obstetric community in this traditional method is an urgent task.

The forceps should be considered as an alternative to CS when the situation, so called 'Failure to Progress' in the lower pelvic strait occurs. Forceps remains a valid option when problems arise during second stage of labour. The most common indications are fetal compromise and failure to deliver spontaneously with maximum maternal efforts. There is a clear trend to choose vacuum extractor over forceps to assist delivery but evidence supports increased neonatal injury with vacuum extraction and lower failure rate with forceps, depending upon the clinical circumstances [8].

Midcavity forceps operations with rotation of 45 degrees or less, classified by the ACOG are safe for mother and fetus [6]. During forceps application three forces are observed i.e. compression force, traction force and rotation force. Only two forces should act at a given time. The use of increase in force is not an alternative. The cardinal rule for forceps delivery is that abandon an usually difficult procedure, evaluate reasons for the difficulty and then allow further progress of labour or consider abdominal delivery. With the forceps, failure is generally due to difficulty in wondering a blade or difficulty in achieving correct cephalic application with easy blade locking or traction given in an incorrect vector. Maternal and fetal complications have been reported to vary, depending on skill and judgment of operator and it is difficult to quantify. In addition, complications rates are often quoted in comparison to normal vaginal deliveries but forceps deliveries are often performed in patients with complicated pregnancies or abnormal labour. In 2009, AI-Suhel R et al reported in their series on Kjelland rotational forceps deliveries which are now

uncommonly performed, with success rate of 95% and maternal complications equivalent to vacuum deliveries. The study also reported that the forceps have relatively low risk of adverse outcome when used by experienced operators.[9] Five year follow up of a randomized controlled study comparing forceps and vacuum concluded that there is no specific evidence to suggest maternal or child benefits or side effects in both [10].

It is amazing how often a fetal life can be salvaged with the timely intervention with an obstetric forceps. The key to maintain the forceps in our armamentarium is to teach and thereby equip ourselves and the younger obstetricians with its use.

In 1959, Wright R C, first reported that breech infants benefit from caesarean delivery. In 2000, after a large - scale international study reported CS is safer for the breech babies, since then caesarean deliveries became the near - universal choice for the same. It also became added advantage to each obstetrician to perform an easier CS rather than to conduct stressful vaginal breech delivery. Six years after publication of the results and recommendations, the data of study was analyzed again and published in an article in 2006 in American Journal of Obstetric & Gynaecology that, because of mistakes in study design the results were unreliable and the study group should withdraw the recommendations. [11] Moreover, analysis of outcome after 2 years did not show difference between vaginal and abdominal deliveries of breech babies. Similarly, Prof. Glezerman M. et al from Israel reported that breech babies are no more at risk during vaginal delivery than cesarean delivery and also there is reduction in maternal mortality and morbidity. In their study only 4% of breech presentation required CS. In a two year follow up, they did not find differences in neurological or developmental outcomes between elective CS and planned vaginal deliveries. In other studies, follow up at school age, no significant difference in terms of severe handicap was observed. With these scientific evidences Prof. Glezerman M is convincing worldwide obstetricians for a return to skilled vaginal delivery of breech babies because CS is riskier for a mother as well as increases maternal risks in future pregnancies. Prelabour selection criteria for vaginal breech delivery includes frank or complete breech with a flexed or neutral head attitude, adequate maternal pelvis, estimated fetal weight between 2500 g and 4000 g. Ultrasound is necessary to assess type of breech presentation, fetal growth & estimated weight and attitude of fetal head.

In United States, inspite of increase in CS rate, there has been no decrease in the number of babies with cerebral palsy since past 30 years. Hence, there is a role of vaginal breech delivery even today. However, all women should be informed about the results of existing evidence (TBI Analysis) in order to make an informed choice of vaginal delivery.

Inspite of recommendations, vaginal breech delivery is becoming a very rare event in the labour ward. However, there will be women insisting for vaginal breech delivery and there will still be women arriving late in labour where CS is no longer and option. In order to provide women the best obstetric care, we need to continue to educate obstetricians and midwives in conducting labour and manual skill associated with vaginal breech deliveries.

External cephalic version (ECV) at term has been shown to decrease the rate of noncephalic presentation at birth and also has reduced the rate of cesarean section associated with breech presentation. It is a safe method and its efficacy has been well established. In 2009, Kok M et al reported that success of an ECV attempt is associated with ultrasound parameters such as fetal position (complete breech), amniotic fluid index > 10 cm and posterior placental location [12].

Symphysiotomy has disappeared completely in modern day practice. Today there are underdeveloped areas and facilities in the world where mothers and babies are lost due to prolonged second stage of labour, delay in delivering of after coming head in breech and shoulder dystocia. Obstetricians should know this procedure in emergency situations especially in places where CS facilities are limited.

Practicing obstetricians encounter increasing number of post-caesarean pregnancies because the number of primary CS for non recurrent causes is rapidly rising. There is a growing concern by the obstetricians managing these cases as there are medical as well as legal problems involved. Many studies reported that CS increased the risk of maternal mortality 2-4 times compared to vaginal birth (VBAC), increased operative time, increased major complications like placenta accreta and uterine rupture, 24% incidence of placenta accreta with one CS, 64% with previous 4 LSCS and 13% patients required caesarean hysterectomy.

Many obstetricians tended to hold the old view "Once a caesarean always a caesarean" but scientific

evidences suggest that VBAC is associated with lower risk of complications for both mother and baby compared to routine repeat CS . Although, VBAC has become accepted practice assuming the success rate of 70% , in reality the rate of VBAC has reduced during the past 10 years from 28% to 9% . Several factors have contributed to this decline. The most significant was uterine rupture. The risk of uterine rupture with one prior LSCS (transverse) was reported 0.6%, with prior two LSCS (transverse) 1.8% and Classical CS has been reported as 6 to 12% [13] . It has also been reported that to avoid one symptomatic rupture, 370 elective CS would have to be performed. Other factors responsible for decline were, obstetricians experiencing complications during trial of VBAC in the past and ACOG guidelines stating that women undergoing a trial VBAC requires the presence of obstetrician, anesthesiologist and/or staff capable of performing an emergency CS throughout the patient's active phase of labour [14.] When considering the trial of VBAC many obstericians and Institutions have adopted separate written consent forms mentioning the risk factors and confounding factors for the same.

Evaluation of scar integrity during pregnancy by sonography is controversial. However in 2010, Jastrow N et al reported that transvaginal sonography for lower uterine scar thickness is a strong predictor for uterine scar defect.[14]

Hence, there is a need to train and educate obstetricians for conducting VBAC rather than resort to LSCS, which amounts to unfortunately going back to the old dictum "Once a caesarean always a caesarean" rather than to follow an appropriate current dictum "Once a caesarean always a hospital delivery".

Therefore, Obstetrics is an art and not just a science. We need our juniors to be masters of this art in order to give justice to the labouring mother and the baby.

References :

1. CDC NCHS data brief, centers for Disease Control and Prevention. Available at http://www.cdc.gov/nchs/data/databriefs /db, 35 ltm ; Accessed May 7, 2010.

2. Chaillet N. Dumont A, Evidence based strategies for reducing caesarean section rates : a Meta-analysis Birth ; 2007 Mar; 34 (1) : 53-64.

3. RCOG statement on the study on caesarean section rate variance among English NHS Trusts the BMJ, 7 Oct. 2010.

4. Kambo I. Bedi N, Dhillon BS, Saxena NC, A critical appraisal of caesarean section rates at teaching hospitals in India; Int. J. Gynecol Obstetet: 2001 : 79:151-58.

5. Villar J, Vallarade E, Wojdyia, Zavaleta N, Carroli G., Velazia A et al Caesarean delivery rates and pregnancy outcome the 2006 WHO global survey on maternal and perinatal health in Latin America Lancet 2006:367:1819-29

6. American college of Obstetricians and Gynecologists. Americal College of Obstetrician and Gynaecologists practice bulletin Operative vaginal delivery; Washington DC ; ACOG June, 2000.

7. Goetzinger KR, Macones GD, Operative vaginal delivery : Current trends in Obstetrics Women's Health (Lond. Engl.) 2008 May : 4 (3) 281-90.

8. Yeomans ER, Operative vaginal delivery : Obstet Gynecol, 2010 March : 115 (3) : 645-53.

9. Al-Suhel R, Gill S, Robson S, Shadbolt B., Kjelland's forceps in the new millennium. Maternal & neonatal outcomes of attepted rational forceps delivery. Aust NZ J. Obstet Gynecol. Oct. 2009-49 (5): 510-14.

10. Johnson RB, Heycock E, Carter J, Sultan AH et al; Maternal and Child Health after assisted vaginal delivery : five year follow up of a randomized controlled study comparing forceps & vacuum; Br. J. Obstet. Gynaecol : 1999 Jun, 106 (6).

11. Krause M., The term breech trial; the rise and fall of randomized controlled trial – a critical survey, Geburtshlife Neonatal 2006 Aug : 210 (4); 121-5.

12. Kok M, Cnossen J, Gravendeel L, Van Der Post JA, Mol BW : Ultrasound factors to predict the outcome of external cephalic version: a meta-analysis, Ultrasound Obstet Gynecol. 2009;33(1):76- 84.

13 American College of Obstetricians and Gynaecologists ACOG practice bulletine. Vaginal birth after previous cesarean delivery no.5,July 1999. Clinical management guidelines for Obstetrician and Gynaecologist Int.J Gynecol Obstet Aug. 1999: 66(2) 197-204

14 Jastrow N, Chaillet N, Roberge S. et al sonographic lower segment thickness and risk of uterine scar defect : A systematic review J Obstet Gynecol Can. 2010 April: 32(4) : 321-7

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