In the obstetric emergency, appropriate intervention contributes to the improvement of maternal and neonatal morbidity and mortality. This year, four experts in Japan were invited to present the clinical practice recommendations for urgent cesarean section (CS), forceps delivery, and treatment for postpartum hemorrhage (PPH).

According to the Report of Ministry of Health, Labour and Welfare, CS rates have risen in Japan in a dramatic fashion from less than 10% in 1984 to 24% in 2011 in general hospitals. When there is immediate threat to the life of women or fetus (i.e. ominous fetal heart rate tracing or placental abruption), urgent CS should be performed as quickly as possible (i.e. within 30 minutes) after making the decision. Dr. Sumikura from Juntendo University introduced the classification of urgency of CS in National Institute for Health and Care Excellence clinical guideline in the United Kingdom. Various factors including mode of communication, task allocation, and staff level of experience were also shown as confounders for the decision-to-delivery interval. In the urgent CS, general anesthesia is often chosen to decrease the decision-to-delivery interval, although regional anesthesia is safer for mother and neonate. Dr. Sumikura recommended a review of the indication of urgent cesarean delivery to reduce the risk associated with general anesthesia.

Most women desire a vaginal delivery and operative procedures (i.e. forceps and vacuum extraction) are effective in the second-stage labor abnormalities. Because both are safe, the operators’ preference/experience is the determining factor which instrument is used. Dr. Kamei from Saitama Medical University emphasized that the precise evaluation of the position and station of the fetal head are prerequisite for forceps. Additionally, Dr. Kamei demonstrated the video clip of forceps as well as several tips for stepwise approach to its application. Education/teaching of forceps in residency training program was also introduced in his presentation.

Obstetrical hemorrhage is one of the leading causes of maternal morbidity and mortality all over the world. The Japan Association of Obstetricians and Gynecologists reported that sixty-two cases were considered as pregnancy-related death in 2012 in Japan. Of those, ~20% cases were cause by PPH. Therefore, it is critical for obstetricians to have a thorough understanding of appropriate management for hemorrhagic complications in pregnancy. Dr. Makino from Juntendo University outlined the management of PPH including balloon tamponade technique and surgical intervention. Especially, Dr. Makino introduced vertical compression sutures developed at Juntendo University. The clinical features of PPH at Juntendo University and the treatment protocol were also shown. Finally, Dr. Woodhams from Kitasato University Hospital demonstrated the recent advances in the interventional radiology (IVR) in the obstetric practice. The IVR with trans-catheter balloon occlusion or arterial embolization is an effective technique for the management of intractable obstetric hemorrhage. In addition, the procedure has minimal morbidity and enables the uterus preserving treatment in PPH. Dr. Woodhams also demonstrated the management protocol for PPH developed in her hospital.

In this symposium, we had a fruitful discussion about clinical issues in obstetric emergency. The categorization for CS based on its urgency is endorsed in each hospital. To achieve safe procedures and reduce CS rate, the residency training of operative vaginal delivery should be developed. A precise understanding of the pathophysiology of PPH is necessary to select appropriate treatment modality. We will continue seeking to achieve best practice for the improvement of perinatal morbidity and mortality.
Working-out of the forceps delivery — for the safety of mother and fetus

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Since the introduction of vacuum extractor in the United States, the trend of operative vaginal deliveries has inclined toward vacuum extraction instead of forceps delivery. The main reason of this trend is simple procedures of vacuum extraction compared with forceps deliveries. To perform safe and successful forceps delivery, many operative procedures are required, and fewer and fewer obstetricians have skills of forceps delivery to mentor young obstetricians.

There have been numerous studies comparing forceps delivery and vacuum extraction, and most of them reported a higher incidence of maternal complications such as third-/fourth-degree lacerations, resulting in the massive postpartum hemorrhage. On the other hand, many reports also found the increase of neonatal cephalohematoma and jaundice mainly because of the multiple trials of extraction.

In my opinion, as long as each step of forceps delivery is meticulously executed, forceps delivery is safe not only for the fetuses but also for the mothers.

In this session, I will discuss the benefits of forceps delivery and also advise how to acquire the skill of forceps delivery with providing educational cartoons.

I hope this presentation will give the inexperienced obstetricians an opportunity to reconsider and master forceps delivery for operative vaginal delivery, especially in the urgent fetal deteriorative conditions.

Hemostasis methods during cesarean section

Shintaro Makino

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Anesthetic management of urgent cesarean section

Hiroyuki Sumikura

Faculty of Medicine Department of Anesthesiology and Pain Medicine, Juntendo University

The role of interventional radiology for postpartum hemorrhage

Reiko Woodhams

Department of Diagnostic Radiology, Kitasato University School of Medicine

This lecture will be published as a review article in this journal.