VIDEO ARTICLE

Technique of forceps delivery using UTokyo Naegele forceps

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Introduction

The rates of operative vaginal deliveries, particularly of forceps deliveries, have decreased to 0.7–4.6% of all births.1,2) A possible explanation for this trend is the fear of severe maternal-neonatal complications believed to be associated with forceps deliveries, despite evidence to the contrary.3,4) In addition, the decrease in the number of forceps delivery educators has resulted in a concomitant decrease in the number of forceps delivery operators.

When performing forceps deliveries, it is of utmost importance to adhere strictly to indications and prerequisites for this type of delivery. Previously, we published a study regarding the objective assessment of fetal head descent, which we named ‘the trapezoidal station’.5) A safe forceps delivery is accomplished through precise assessment of fetal head descent, avoiding the use of forceps when the station is higher than +2. In this video article, we explain the technique for forceps delivery. The patient was informed and had agreed to participate in this case report.

Techniques

In this section, techniques are explained according to the captions in the video. At our facility, we use UTokyo Naegele forceps (Atom Medical Corporation, Tokyo, Japan), which are thinner, shorter, and lighter than standard Naegele forceps, and developed for Japanese women.

Simulated holding of the forceps

Before applying the forceps, matching of the blades should be confirmed. Holding the forceps and visualizing the traction can be useful for enabling the operator to remain calm, especially during emergencies, such as when the fetal status is non-reassuring.

Application of the left and right blades

The left blade should always be applied first. The right fingers should be inserted between the left vaginal wall and the fetal head, and the forceps handle should be held gently in the left hand. The lower portion of the blade should be pushed—not forcibly, but gently—inward with the right thumb along the cephalic curve, which is the direction without any resistance. At the same time, the left hand holding the end of the forceps should move the handle so that it hangs vertically. Application of the right blade of the forceps should be symmetrical to the reflection of the left blade.

Joining of the forceps

After insertion of the blades, the matching of the blades at the lock should be confirmed. If the blades are correctly applied, it is easy to join the blades together at the lock. If blade insertion is shallow, the handles are usually placed along the line between the horizontal plane of the handle in a downward convex. In such a case, the lock will join with supination and dorsal movement.

Trial traction

A trial traction should be performed before the actual traction to check whether the fetal head descends with traction without slippage of the forceps.

Traction: downward-horizontal-upward

The bilateral forceps should be joined in synchronization with uterine contraction, and traction should be initiated. The forceps should be pulled after bearing down. Traction should be slow and continuous, with constant force applied in the correct direction.
Episiotomy
Episiotomy performed just before upward traction reduces the risk for severe perineal laceration. However, novices are allowed to perform an episiotomy before forceps application.

Removal of the forceps
Removal of the forceps should be carried out in the reverse order of insertion; i.e., the right blade first and then the left blade, along the cephalic curve.

Discussion
This video article explains how to perform a forceps delivery. Forceps delivery is a mandatory maneuver, and obstetricians had better learn the technique of forceps delivery. Andrews et al. reported that performing more than 13 forceps deliveries increased the likelihood of obstetricians using the technique in practice. However, as clinical application without any experience should be avoided, we feel that video learning or simulation of the forceps delivery maneuver is important. Lee et al. suggested that video learning may motivate obstetricians to learn this skill. We hope that this video will help all obstetricians acquire forceps delivery skills.

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Conflict of interest
None.

References

Video Legend
Video image of a delivery using UTokyo Naegele forceps. The video consists of seven sections: Simulated holding of the forceps, application of the left blade and the right blade, joining of the forceps, trial traction, traction: downward-horizontal-upward, episiotomy, and removal of the forceps.

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