

## Transperineal U.S.G. during labour

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### Summary

Present study was undertaken to evaluate a new method to know the internal rotation of the head during second stage of labour. The difficulty to know the rotation is usually faced, when there is a caput formation, and one wants to apply forceps. A transperineal sonography is well recognized and was made use of for the present study.

### Introduction

Internal rotation is an important step in normal labour, but usually during labour this is not looked for, unless there is difficulty in delivery and forceps application is thought of. If head remains unrotated one can not apply forceps and if applied to nonrotated head (pelvic application) one will face a difficult situation. To know the rotation with perfection, ultrasound machine was used in this study.

### Material and methods

Transperineal sonography is a well recognised method used to see the pelvic structures. The same principle is made use of by the author in identifying the rotation.

U. S. G. transducer- linear or convex sector was used for this purpose.

### Steps of the procedure:

1. Identifying the probe direction & it's orientation with screen. This can be done easily by passing a finger over the probe from upper end to lower by holding the probe vertically (Jeanty & Romero, 1987)
2. Application of jelly over the probe and then a plastic sheet or rubber glove over it. In our study a newly opened plastic bag of I. V. set was used. It's unsterile surface was covering the probe while the sterile surface was facing the vulva.
3. Vulva swabbed down with savlon after giving hip and knee flexed position with abduction as is done for P/V examination.
4. Probe covered with plastic bag was applied directly to one labia and then tilted till a good picture was seen.
5. Once again the probe direction and screen orientation confirmed by just tilting one end of the probe while other end touches the labia.

6. Probe was rotated till a satisfactory picture was seen on the screen.

#### Observations

1. The suture line could be seen easily on the screen
2. Orientation of probe and screen and it's relation with head was easy.
3. In a survey of 10 cases the findings on the screen were confirmed on P/V examination and during the delivery of the head.



Fig 1

#### Discussion

Before applying forceps one looks for criteria to be fulfilled e.g. full dilatation, rupture of membranes, adequacy of pelvis, suitable presentation and position, uterine contractions, empty bladder and bowels. Rotation of head is usually ascertained by P/V examination by palpating the suture lines & fontanelles. But identifying the suture lines & fontanelles is often difficult due to caput formation. As such identifying the two fontanelle is difficult in practice, though theoretically this should be easy because in case of anterior, four suture lines radiate from it and in case of posterior, only three which join in a shape of Y. Nevertheless, within the cramped space of vagina it is terribly easy to be mistaken by relying on counting the sutures.

Another method of fontanelle identification which is sometimes useful depends upon the fact that, the parietal bones often overlap the frontal bones, whereas overlapping does not usually occur at the frontal suture so that a finger placed on the frontal bone is able to depress first one and then the other.

Thirdly one can feel for the ear.

But with big caput, cramped space of vagina noncooperative patient and nonconfident accoucheur-it is difficult to ascertain the rotation of the head.

If by chance the rotation of the head is misdiagnosed and forceps is tried-the situation becomes embarrassing, because one is likely to land in difficulties like failed forceps with high foetal mortality and morbidity.

Parry Jones (1952) has listed the causes of failed forceps and has given high importance to malposition of the foetus.

To overcome the difficulty of mistaking the rotation a simple method of viewing the suture line by ultrasound instead of palpating is possible. This method also bypasses the painful and unwarranted manipulations to know the rotation by P/V examination.

#### Conclusion:

This is a very simple noninvasive method to know the rotation of the head during labour and mainly in difficult II<sup>nd</sup> stage with caput formation. The only requisite is to have a U.S.G. machine at hand.

#### References:

1. Jeanty P. & Romero R. : Obstetrical Ultrasound McGraw Hill book company 1987, page 7.
2. Parry Jones : Quoted by Ian Donald in Practical Obstetric Problems. 4<sup>th</sup> Ed. 1974. p. 558. Lloyd. Luke Ltd. London.