VAGINAL ULTRASONOGRAPHY - THE BEST PREDICTOR OF INCOMPETENT OS

NEELA SHARMA ● REENA SRIVASTAVA

SUMMARY

Routine vaginal ultrasonography in Ist and IInd trimester of pregnancy can prevent midtrimester abortion due to cervical incompetence. Internal OS diameter 15mm or more in Ist trimester and 20mm. or more in IInd trimester is highly indicative of incompetent OS. (Shah, P.K. et al, 1995).

INTRODUCTION

Incidence of incompetent OS is 0.05 - 1.0%. It is responsible for as many as 16-20% of IInd trimester loss. (Shah, P.K. et al, 1995).

Diagnosis of incompetent OS can be done digitally in multigravida where external OS is open; though this procedure may cause infection. In primi-gravida, condition of internal OS cannot be determined by digital examination, hence vaginal ultrasonography becomes the best method to know the condition of the internal OS.

Dept. of Obst & Gynae. B R. D. Medical College, Gorakhpur (U.P.)

Normal diameter of the internal OS is 1-2 mm in primigravida and 3-5 mm in multigravida and this diameter is considered as closed internal OS The minimum cervical length in Ist trimester is 2.5-3.0 cm and 3.0 - 4.0 cm in IInd trimester.

MATERIAL AND METHODS

Ninety patients at 10-14 weeks of gestation were selected in our study to assess the condition of the internal OS.

The patients were divided into the following groups :

Group A : Fifty pregnant patients with normal obstetrical history served as controls.

Group B : Thirty pregnant patients with past history of mid trimester abortion.

Group C : Ten patients presented as inevitable abortion

Method for doing ultrasonography :

After evacuating her bladder the patient lies on the table in the dorsal position with flexion at the hip and knee joints with thighs abducted. Vaginal probe is inserted in vagina upto 2.5 cm from the introitus and the cervix is visualized both in sagittal and coronal planes (Frank et al 1993). Simultaneously the patients were also investigated to know other causes of abortion.

RESULTS

Group A : In normal control group of 50 patients the internal OS was between 1-7 mm in diameter and the cervical length was between 2.5-4.0 cm.

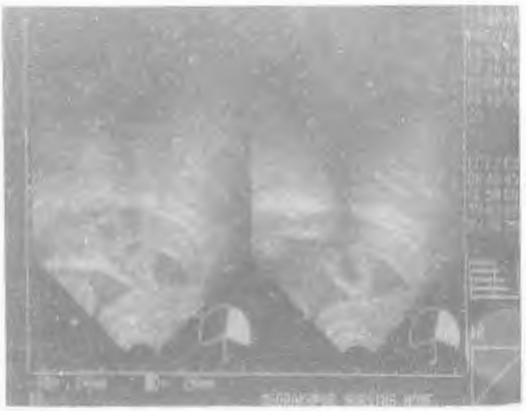

Fig. I. Patient at 16 weeks of pregnancy with dilated internal os (20mm).

Fig. II. Patient at 18 weeks of pregnancy with dilated intternal os (22mm).

Group B : Twenty patients out of 30 who came with history of mid trimester abortion had internal OS diameter between 1-10 mm (almost normal) and cervical length was between 2.2-2.5 cm. In these 20 cases 16 had normal fetus but 4 showed no cardiac activity so past history of abortion might be because of some other reason but not due to incompetant OS. In the rest of the 10 patients, the internal OS was between 15-16 mm and the cervical length was between 2.3-2.5 cm (Fig. I).

Group C: Ten patients presenting with inevitable abortion had internal OS diameter between 16-20 mm (Fig. 2).

DISCUSSION

In 10 patients of group B the Mcdonald Stitch was applied and all the cases reached term and delivered vaginally. In only 2 patients of group C Mcdonald stitches was applied because both

these 2 patients presented with a dilated internal OS and with no pain. 1 out of these 2 patients delivered at term. The other one required reapplication of Mcdonald Stitches at 18 weeks as the first stitch became loose. This patient delivered at 35 weeks (Preterm).

CONCLUSION

Diameter of internal OS more than 15 mm in Ist trimester and more than 20 mm in IInd trimester is indicative of incompetant cervix, and circlage is needed to avoid abortion. Normal diameter of internal OS with slight short cervix does not give rise to mid-trimester abortion but the patient may go into pre-term labour.

If vaginal ultrasonography is done as a routine in I and IInd trimester of pregnancy then midtrimester abortion due to incompetant OS can be avoided.

REFERENCES

1. *Dr. P. K. Shah, "Ultrasonography in Obstetrics and gynaecology" Ist edition 1995, Chapter 10 (TVS in Cervical incompetance) Page No. 103.*
2. *Frank A. Cherverak, Glenn C Isaacson, Stuart Campbell, Ultrasound in Obstetrics and Gynaecology Volume 2 Ist edition 1993, Chapter 1361 (Vaginal ultrasonography of the pregnant cervix) Page No. 1159*