

Threatened abortion: outcome in relation to intrauterine clot volume

Babu S. Patel • Harshada M. Joshi • Nimish C. Pandya

Dept. of Obst & Gyn,

Sheth L.G. General Hospital, Sheth K.M. School of Post Graduate Medicine & Research,
Maninagar, Ahmedabad 380 008.

Summary : Bleeding per vaginum in pregnancy is considered as an ominous sign. Ultrasound is an accurate method for evaluation of threatened abortion.

A prospective high resolution sonographic study of gravid uterus was performed in one hundred patients with clinical diagnosis of threatened abortion. Intrauterine haematoma volume was calculated by formula $V = L.B.W. (0.5)$. All patients were kept under observation.

Patients with intrauterine clot volume of more than 40ml, even after 16 weeks had grave threat foetal life, patients with intrauterine clot volume 30 to 40ml had increased risk of premature delivery. The results show that high resolution US is indicated to establish outcome of threatened abortion and its management in relation to intrauterine clot volume.

Introduction

Threatened abortion is defined as vaginal bleeding alone or associated with lower abdominal pain in a pregnancy of less than 20 weeks. Bleeding per vaginum in early pregnancy is considered as an ominous sign. Approximately 12% of all pregnancies end in abortion. Ultrasound is an accurate method for evaluation and prognosis of threatened abortion. The location of intrauterine clot can be defined by its predominant location as 1) Subchorionic, 2) Retroplacental and 3) Preplacental, (David. A. Nyberg et al 1986., David. A. Nyberg et al 1987). Intrauterine clot volume has more prognostic value than the rate of external bleeding. There is significant association between chorionic villous haemorrhage and retroplacental haemorrhage from 12 weeks to term as it reflects disturbance of foetal vascular dynamics. (Margit Mantoni et al 1981, Margit Mantoni et al 1985). In the present study ultrasonic evaluation was done in patients with clinical diagnosis of threatened abortion. Intrauterine clot volume was measured. Clinical follow up was done in all patients.

Materials & Methods

The study comprises of 100 patients of threatened abortion. Majority of patients with threatened abortion

were having 12 to 20 weeks pregnancy. Intrauterine clot volume was calculated by formula $V = L.W.B.(0.5)$. US was performed using a commercially available electronic real time scanner with 3.5 MHz transducers. Transabdominal examinations were performed through a full bladder. Follow up US was also studied.

Results

Among thirty four patients out of 100 patients, we found an echo-free area between the uterine wall and membranes. The gestational age of these 34 pregnancies ranged from 11 to 20 weeks as judged from crown rump length or biparietal diameter. The women were 20 to 35 years of age. The volume of echo free area ranged from 6 to 90 ml. It was located on the posterior wall, close to or covering the internal os. In five patients the echo free area elevated a part of placental border, in the remaining patients the echo free area reached close to the placental border.

Volume of clot	No. of pt.	Outcome		
		Abortion	premature Delivery	fullterm delivery
<20ml	21		8	13
20-40 ml	7	3	4	
>40ml	6	4	2	

In twenty one patients with echo free area of 20ml or less, repeat examinations showed decrease in size of echo free area and all echo free area had disappeared at 20 weeks. Thirteen pregnancies had full term delivery and 8 had premature delivery. Seven patients had echo free area of 20 to 40 ml, 3 patients had abortion and 4 had premature delivery. Six patients had echo free area increased in size and complete detachment of placenta was found. One patient was readmitted at 24th week with bleeding per vaginum and she aborted. The second patient was readmitted at 29th week with rupture of membranes and she delivered a live low birth weight baby.

Discussion

Hematomas smaller than 20 ml, typically occurring at 12 to 16 weeks gestation tend to diminish gradually in size and have a good prognosis. Hematomas of more than 40 ml occurring after 16 weeks gestation result in a considerable risk of abortion or premature delivery. The

mechanism of hematoma formation is likely to be minor placental abruption. The blood dissects distally between the uterine wall and membranes.

In conclusion, high resolution real time sonography has proven to be a sensitive and specific imaging method to predict outcome of threatened abortion in relation to intrauterine clot volume.

References

1. David A. Nyberg, Filly R.A., Mahony B.S. Radiology. 158:397, 1986
2. David A. Nyberg, Laurence A. Mack, R Brooke Jeffery Jr. Faye C. Laing Am.J.Roentgenology 148:161, 1987.
3. Margit mantoni, J Fog Pedersen; B. J.Of Obst and Gyn. 88:47. 1981
4. Margit Mantoni, J Fog Pedersen; B. J. Of Obst gyn 65:471, 1985