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## RESEARCH ARTICLE

### CLINICAL SIGNIFICANCE OF ULTRASOUND DIAGNOSED PLACENTAL LAKES

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#### ABSTRACT

The study included 1,850 pregnant women between 22 and 36 gestation week. In 21 patients placental lakes were noticed by ultrasound. No statistically significant difference was found between the pregnant patients with ultrasound diagnosed placental lakes and the control group in terms of gestation age at the time of delivery, fetal weight and its condition (Apgar score) and uteroplacental complications within the placental period.

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## INTRODUCTION

Placental lakes (P.L.) are placental cysts filled with blood. On sonography they are visualized as echo negative fields of oval or irregular shape on the surface or inside of the placenta. When or under pressure on the uterus, Their shape may change with uterine contractions or when the uterus is subjected to pressure. Placental lakes are common and occur in about 20% of all pregnancies. Normally, sonographers attach no significance to them and the funding is not reported as it is not associated with any specific pathology of pregnancy. Placental lakes generally occur in thicker placentas and are considered as more enlarged intervillous spaces filled with maternal blood.

### Aim of the Study

There is an opinion that the presence of P.L. does not mean that pregnant women with such placenta will have more pregnancy complications than other pregnant women.

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In placentas with P.L., however, the level of AFP is higher than normal. The presence of P.L. causes anxiety and poses to the doctor certain suspected occurrence of some complications related to the progress of the pregnancy, condition of the fetus or the mother. Our task within this context was to determine whether placentas with P.L. involve more often the following pathology:

- Placental abruption
- Preterm birth
- IUGR
- Increased risk of preeclampsia
- Babies of a low birth weight
- Increased incidence of Caesarean section
- Increased maternal blood loss before placental expulsion
- APGAR score rating of newborn babies

## MATERIALS AND METHODS

We observed 1,850 pregnant women within a period of one year.

A group was selected out of them, containing placentas with higher number of placental lakes (more than 3 placental lakes, occupying over 10% of the placenta) or P.L. of sizes over 20/20 mm. Form a group of 21 patients (about 2% of the patients). In the patients measured the thickness of the placenta, such measurements are made perpendicular. Thus a group of 21 patients was formed (about 2% of the total number of patients observed). Thickness of the placenta was measured in the patients under observation. Measurements were taken at a right angle to the basal and horionic plates in the mid portion of the placenta, near the cord insertion usual. In patients from 22 to 32 weeks gestation foetal biometric parameters and amniotic fluid levels were measured, and Doppler scan of the uterine artery and umbilical cord performed every 4 weeks. In this group, thickness of the placenta was between 27 and 34.5 mm. No progress of preeclampsia and IUGR was found in this group of patients.

In patients from 32 to 38 weeks gestation thickness of the placenta was 34.5 - 42.5 mm. Foetal biometric parameters and amniotic fluid levels were measured, and Doppler scan of the umbilical artery and uterine artery performed for this group. At 36 to 38 weeks gestation a foetal NST was done and maternal blood count, urine and blood pressure measurements were taken every week.

No progress of preeclampsia and IUGR was found in this group of patients, too. Also, there were no indications of foetal distress. All patients gave birth to full-term babies of high APGAR scores. In one of the patients with low-lying placenta the differential diagnosis of the presence of placental lakes or of placenta accreta was difficult. This patient needed a Caesarean section to give birth.

## Conclusion

- No higher risks for the foetal development and life were noticed in placentas with placental lakes as compared to the others.
- No increased incidence of preeclampsia was noticed
- Placental lakes do not increase the risk of IUGR
- Placental lakes do not affect condition of the foetus, its weight and condition at birth.
- Although our study involved a small group, however, it brings some peace of mind concerning the outcome of pregnancy.

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