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Ovarian ectopic pregnancy: evaluation by transabdominal color Doppler US in the emergency ward

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Purpose:

To evaluate the diagnostic value of color-Doppler US and the spectral forms of pulsed Doppler in ovary ectopic pregnancies in the emergency ward.

Materials and Methods:

Seventeen patients with suspected ectopic pregnancy were examined in the emergency ward from January 1998 to March 2005. Initial examination by transabdominal sonography of the pelvis was followed by pulsed color Doppler imaging of the ovary and of any suspected latero-uterine abnormal vascularity. The resistive index (RI) of blood flow in the ovarian arteries was measured.

Results:

Ten peripheral hypervascularizations, five irregular hypervascularizations and two avascular ectopic pregnancies in the ovary were found with color Doppler imaging. The pulsed Doppler spectrum revealed a low-impedance flow in 13 patients (R.I <0,60) and a high-impedance flow in 2 patients (R.I >0,80-1). One corpus luteum cyst was misdiagnosed as ectopic pregnancy. The ectopic pregnancy was seen on the same side as the corpus luteum in 12 of 16 cases.

Conclusion:

The abnormal implantation and ovarian trophoblast invasion in ectopic pregnancy can cause more marked blood flow changes in the adjacent supplying vessels than in the main ovarian arteries and it can facilitate the diagnosis of ectopic gestation in the ovary in the emergency ward.