



# ARCTIC HEALTH

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## Color Doppler flow as an indicator of trophoblastic activity in tubal pregnancies detected by transvaginal ultrasound.

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Abstract: OBJECTIVE: To evaluate the potential benefits of transvaginal color Doppler in the diagnostic evaluation of tubal pregnancies. METHODS: Fifty-two women with suspected tubal pregnancy were examined by transvaginal ultrasonography and color Doppler. Those with positive scans were referred for exploratory laparoscopy. The area of the tubal pregnancy was examined by color flow imaging and the resistance indexes (RIs) of the artery blood flows were calculated. The pulsatility indexes (PIs) of both uterine arteries were also measured and serum beta-hCG was quantitated. RESULTS: Tubal pregnancy was diagnosed by transvaginal ultrasonography in 38 of the patients. There were two false-negative and two false-positive results. Color flow in the trophoblastic tissue was detected in 50% of the tubal pregnancies, and the mean (+/- standard deviation) RI of the trophoblastic flows was 0.51 +/- 0.12. The RIs of the trophoblastic flows tended to decrease at higher beta-hCG levels, and 88.2% of the cases with detectable trophoblastic flow had beta-hCG above 800 mIU/mL. The average PI of the uterine arteries was 2.28 +/- 0.89. The PIs of the ipsilateral uterine arteries were significantly lower in the patients with trophoblastic flow than in those without it. CONCLUSION: By monitoring trophoblastic activity, color Doppler may differentiate between active and inactive disease and could assist in choosing the correct treatment.

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