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Impaired uterine arterial blood flow in pregnant women with recurrent pregnancy loss.

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OBJECTIVE: This study was undertaken to evaluate uterine perfusion, which regulates uterine receptivity, in women with recurrent pregnancy loss. METHODS: We evaluated the blood flow resistance in the uterine arteries of 104 pregnant women at 4 to 5 weeks' gestation by transvaginal pulsed Doppler ultrasonography (control group, n = 52; and recurrent pregnancy loss group, n = 52). Blood tests for antinuclear and antiphospholipid antibodies were also performed. RESULTS: The uterine arterial pulsatility index in the recurrent pregnancy loss group was significantly higher than that in the control group. Women with antinuclear or antiphospholipid antibodies had an elevated pulsatility index in the uterine artery, which is prominent in women with recurrent pregnancy loss. Coagulopathy and vascular dysfunction caused by autoantibodies may impair uterine perfusion. However, the uterine arterial pulsatility index in the recurrent pregnancy loss group was significantly higher than that in the control group even among women without antinuclear antibodies or among women without antiphospholipid antibodies. This observation strongly suggests that the uterine artery pulsatility index may be an independent index for recurrent pregnancy loss. CONCLUSIONS: The introduction of pulsed Doppler ultrasonography has provided the means for noninvasive evaluation of uterine impedance and may identify patients with recurrent pregnancy loss associated with impaired uterine perfusion.

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