Dongmei Liu, Qingqing Wu, Min Yang. 1. Beijing Shijitan hospital, Capital Medical University, Beijing, China.
2. Beijing Shijitan Hospital, Capital Medical University, Beijing, China. 3. Beijing Obstetrics and Gynecology Hospital, Capital Medical University, Beijing, China.

**Objectives:**
To demonstrate the feasibility of utilizing intravenous contrast-enhanced ultrasound (CEUS) to visualize the flow perfusion in the easily misdiagnosed scar pregnancy (SP) and to improve the diagnostic rate.

**Methods:**
The intravenous CEUS was performed in 3 patients with clinical suspected SP, who were hardly diagnosed by conventional ultrasound. The perfusion pattern, clinical diagnosis and treatment process were analyzed.

**Results:**
The three cases include one Intramural pregnancy (IUP) after hysteromyomectomy, in which a gestational sac was demonstrated in the left uterine horn by conventional ultrasound. Other two cases are mass-based Caesarean scar pregnancy (CSP) with and without curettage, with a heterogeneous lesion detected in the anterior wall at the lower segment uterus. In all these cases, fast accumulation of contrast agents along with high intensity in the lesion and myometrium nearby are observed by intravenous CEUS; continuous perfusion was also detected between lesion and myometrium in the scar. The features of intramural pregnancy by intravenous CEUS was that an obvious supply vessel could be seen in the myometrium nearby the gestational sac during early enhancement stage. The agent was unevenly high accumulated in the two cases of mass-based CSP. For the 2nd case with incompletely abortion, After Uterine Artery Embolization (UAE), spiral enhancement still can be demonstrated in the mass.

The patient received hysterectomy and curettage at last. In the 3rd case, the shapes of enhancement area were demonstrated like branches and mamillary. The mass showed no enhancement after UAE. Two month later, the mass disappeared in the follow-up visit.

**Conclusions:**
The intravenous CEUS can provide blood perfusion evidence of SP, ascertain the blood supply vessel, clarify the perfusion pattern of the lesion, and precisely identify the implantation site of the embryo. It can also improve the diagnostic accuracy rate, estimate therapeutic effect and show more important diagnostic information for clinical treatment followed.