



## Poster Presentation



تهران ۴-۲ بهمن ماه ۱۳۹۳ / مرکز همایش های ابوریحان دانشگاه شهید بهشتی

### Ultrasound Evaluation of First Trimester Emergencies: The Key Step to Protect Mother and fetus Health

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**Background:** The aim of this manuscript was to describe the application of sonography in the investigation of first trimester emergencies.

**Method:** A narrative review was performed within articles published at "PubMed", "Elsevier", "SID", original text books and etc. to reach the purpose. Several high quality sonograms of patients referred to Royan institute imaging department were used to illustrate the first trimester emergency complications.

**Results:** Many pregnant women present at emergency department complaining from sudden vaginal bleeding or acute pelvic pain. Some of them may present with shock according to heavy bleeding, which is a life-threatening medical emergency. There are several obstetric or non-gynecologic problems causing emergency for pregnant women at first trimester, such as "Ectopic Pregnancy (EP)", "Miscarriage", "Molar Pregnancy", "Adnexal Tortion", "Appendicitis", etc. Most of these complications manifest as vaginal bleeding and/or pelvic pain, but accurate administration of the patient varies depending on each problem. So, certain differential diagnosis between these problems is a key for early decision making and saving mother and fetus lives. Correct diagnosis can be made by means of sonography and laboratory tests. In experienced hands, high resolution "real-time" sonography is an accurate, non-invasive, and out-patient tool that helps midwives and obstetricians to evaluate mother and fetus health in these situations and to differentiate between various pregnancy complications in earlier stage. Therefore, every midwife or obstetrician working at emergency department needs to be aware of its application for correct diagnosis and effective administration of the patients. In this article, we describe ultrasound evaluation of these conditions to help practitioners to better manage the patients.

**Conclusion:** A proper way for saving the time and early detection of the emergency condition is "definite diagnosis of the reason", by means of sonography and laboratory tests. Sonographic assessment of the patient is a key step in the diagnosis and management of the emergency conditions and saving mother's lives.

**Key words:** First Trimester, emergency condition, pregnant woman, sonography