

International Conference on Women's Health, Gynecology & Obstetrics

July 08-10, 2014 DoubleTree by Hilton Hotel Chicago-North Shore Conference Center, USA

Non-invasive tools for the diagnosis of gynaecological potentially life-threatening emergencies: A systematic review

Viola Polena, Cyrille Huchon, Catalina Varas Ramos, Alexandre Dumont, Roman Rouzier and Arnaud Fauconnier
University of Versailles St-Quentin, France

Background: The prompt and accurate diagnosis of gynaecological potentially life-threatening pathologies (G-PLE) like complicated ectopic pregnancy (C-EP: ruptured ectopic pregnancy), complicated pelvic inflammatory disease (C-PID: tubo-ovarian abscess & pyosalpinx), adnexal torsion (AT) and hemoperitoneum (HmPT) of any gynaecological origin is crucial for reducing the morbidity and mortality associated with these conditions.

Objective: To systematically identify non-invasive tools for the diagnosis of any G-PLE described in the literature and to assess their diagnostic accuracy.

Methods: It was searched the following electronic databases from 1990 to December 2012: MEDLINE; EMBASE; Cochrane Central Register of Controlled Trials (CENTRAL; The Cochrane Library) for English or French language publications reporting on the diagnosis of G-PLE. Studies were eligible if they were diagnostic studies of all designs, with a gold standard, with sufficient information to allow the construction of a 2x2 contingency table, in which at least one of the G-PLE was concerned. Two of authors (VP, CVR) working independently used a standardized data collection form to extract data from each selected study and assessed the quality of each study using QUADAS 2 tool.

Results: It was identified 8288 reports of diagnostic studies concerning the G-PLE and 45 articles were suitable for systematic review. The most common diagnostic tool evaluated was transvaginal ultrasound (20/45, 44%) followed by medical history (18/45, 40%). Clinical examination (vital signs, abdominal palpation, bimanual examination) was evaluated in 15 (33%) and laboratory tests (blood count, B-hCG, CRP) in 14 (31%). Through different evaluated signs, 7 ultrasound signs, as well as, the identification of a mass by abdominal palpation or vaginal examination, the measure of systolic blood pressure, the rates of Hb, presented significant diagnostic performances of clinical utility ($Se \geq 95\%$ & $LR - \leq 0.25$, or $Sp \geq 90\%$ & $LR+ \geq 4$). Abnormal Doppler findings highly suggest an adnexal torsion with both a good sensibility (range: 76%; 100%) and specificity (range: 94%; 100%), while free pelvic fluid highly suggest a ruptured ectopic pregnancy or hemoperitoneum with a specificity range through the studies of 91%; 100%.

Conclusions: In conclusion, the results of this systematic review suggest that non-invasive diagnostic tools and the skill set for clinicians required to deal with different G-PLEs are essentially the same. Medical history and symptoms contribute in the selection of patients with suspected G-PLEs. Assessment of vital signs, as well as clinical examination, ultrasound and laboratory tests should be considered in women with suspected G-PLE, in predicting the presence of G-PLEs. However, no clinical finding or test is reliable sufficiently for detecting G-PLEs. So, they should be incorporated within a diagnostic model in conjunction with other tests. Obtained results highly support the use of ultrasound.

violapfr@yahoo.fr