DIAGNOSTIC VALUE OF SERUM D-DIMER LEVEL FOR TUBOOVARIAN ABSCESS: A CROSS-SECTIONAL PILOT STUDY
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Objective: Tuboovarian abscess (TOA) is found most commonly in reproductive aged-women. These abscesses are typically result from upper genital tract infections involving fallopian tube, ovary, peritoneum, and, occasionally omentum, bowel and bladder. TOA is a serious manifestation of pelvic inflammatory disease (PID). Therefore, those patients with pelvic mass and complaining about pelvic pain should undergo thorough differential diagnosis regarding TOA, ectopic pregnancy, endometrioma, ovarian torsion, ovarian cyst and pelvic neoplasm. Diagnostic procedures to document TOA require mainly clinical diagnosis with pelvic examination plus diagnostic approaches regarding ultrasonography and some blood tests. However, there is no single diagnostic gold standard blood test. The d-dimers are cross-linked fibrin degradation products, which are formed during the lysis of fibrin clots. They are widely used as a diagnostic tool for thromboembolic disorders. Moreover, increased serum D-dimer concentrations have also been reported in various inflammatory disorders, such as sepsis, severe diffuse peritonitis, rheumatoid arthritis, ulcerative colitis and PID. Thus, aim of this study was to analyze the usefulness of serum D-dimer level for diagnosis of TOA.

Materials and methods: This study was conducted between October 2012 and August 2013 in a university hospital. Serum D-dimer level was determined in 36 patients with TOA and in 39 patients with adnexal cyst.

Results: Besides marital status, baseline characteristics of both groups were comparable. Mean D-dimer level were higher in patients with TOA (1870.6 ± 2401.7 ng/mL in the TOA group vs. 164.4±81.1 ng/mL in the adnexal cyst group; P 0.0001). D-dimer had a diagnostic value of 99.9%, specificity of 100.0% and sensitivity of 97.4% based on a cut-off value of 314 ng/mL for predicting TOA.

Conclusions: Serum D-dimer level was significantly elevated in women with TOA than other adnexal cyst. Thus, this inexpensive, feasible and reproducible marker can be used for differential diagnosis of TOA.