INTRODUCTION/BACKGROUND

Accurate preoperative diagnosis of adnexal mass helps to estimate the risk of malignancy and enables one to choose the best management approach. Prediction models have been developed to assist clinicians to triage patients to appropriate treatment pathways; and both ADNEX and GI-RADS have shown good accuracy; no study has been done comparing the two systems. The main objective was to evaluate and compare the diagnostic accuracy of Assessment of Different Neoplasias in the Adnexa (ADNEX) Model and Gynecology Imaging Reporting and Data System (GI-RADS) in preoperative assessment of adnexal masses taking histopathology as gold standard.

METHODLOGY

In this analytical study, sixty patients more than 14 years of age undergoing surgery for adnexal masses were assessed with transabdominal and transvaginal ultrasound 2–3 days prior to surgery. In cases were surgery was not possible, biopsy was performed to confirm histology. Pregnant women, women with previously established ovarian pathology were excluded. Score probability of the Assessment of Different Neoplasias in the Adnexa (ADNEX) Model and Gynecology Imaging Reporting and Data System (GI-RADS) was calculated based on the ultrasound parameters of adnexal mass.

RESULTS

For ADNEX model sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV) and accuracy were 87.50%, 91.7%, 87.50%, 91.7% and 90.0% respectively. The diagnostic performance of GI-RADS category in terms of sensitivity, specificity, PPV, NPV and accuracy was 95.8%, 61.1%, 62.2%, 95.7% and 75.0% respectively. Overall the diagnostic performance of ADNEX model was better compared to GI-RADS in terms of specificity and positive predictive value with significant difference (p<0.05). The Area under curve (AUC) was 0.957 and 0.919 for ADNEX and GI-RADS respectively (p=0.252).

CONCLUSION

To conclude, both ADNEX and GI-RADS system had satisfactory diagnostic performances and high negative predictive values. However, the ADNEX model showed better specificity and positive predictive value compared to GI-RADS.