Frequency of sexually transmitted organisms in pelvic infections and their response to treatment

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ABSTRACT

Introduction: PCR tests have become commonly available in Malaysia to detect various sexually transmitted organisms. However, their significance and response to treatment remains unknown. This study is undertaken to determine the prevalence of various sexually transmitted organisms in various conditions including cervicitis, pelvic inflammatory disease and vaginitis and the response to treatment. **Method:** 500 patients attending a gynaecological clinic from 2015 to 2021 were included in the study. PCR tests were performed on cervical swabs to detect Chlamydia trachomatis, Neisseria gonorrhoea, Trichomonas vaginalis, Ureaplasma urealyticum, Ureaplasma parvum, Mycoplasma genitalium and Mycoplasma hominis. For each condition, the prevalence of each organism was calculated. For those given treatment and had repeat tests performed, the response to treatment was calculated. **Results:** 500 patients had 749 tests performed. 398 (53.1%) of the tests were positive with at least 1 organism detected. The most commonly found organism was Ureaplasma parvum. Regarding the response to antibiotics, for Ureaplasma parvum, 55.2 % were susceptible to moxifloxacin and 54.5% were susceptible to doxycycline. For Ureaplasma urealyticum, the best antibiotic to recommend would be azithromycin, to which 74.1% were susceptible. 52.9% of Mycoplasma hominis were susceptible to azithromycin. 100% of Chlamydia trachomatis were susceptible to azithromycin. Only 37.5% of Mycoplasma genitalis were susceptible to azithromycin. **Conclusion:** The most common organism in patients with cervicitis and pelvic inflammatory disease is Ureaplasma urealyticum. The recommended antibiotics are moxifloxacin and doxycycline. Azithromycin remains a useful drug against Chlamydia trachomatis and Ureaplasma urealyticum.

The role of shearwave elastography in differentiating malignant and non-malignant endometrial pathologies

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ABSTRACT

Introduction: We aimed to assess the efficacy of shearwave ultrasound elastography (SWE) in addition to conventional transvaginal ultrasound (TVUS) in differentiating between malignant and non-malignant endometrial pathologies. **Methods:** 117 participants (15 malignant, 102 non-malignant) were examined with TVUS, followed by SWE. The SWE findings on the endometrium, i.e., Emean and Emax (kPa), were correlated to the histopathological findings. The relationship between the SWE values and endometrium thickness was studied. Receiver operating characteristic (ROC) analysis was performed to determine the sensitivity, specificity, positive predictive values (PPV) and negative predictive values (NPV) of the Emean, Emax and endometrium thickness cut-off values. **Results:** Endometrium SWE in 15 patients with confirmed endometrial carcinoma showed statistically significant higher Emean and Emax than the non-malignant endometrial diseases ($p < 0.05$). The optimum cut-off values to differentiate between malignant and non-malignant endometrium were: Emean= 88.6 kPa (sensitivity 86.7%, specificity 87.3%, PPV 50%, NPV 97.8%); and Emax=100.2 kPa (sensitivity 86.7%, specificity 88.2%, PPV 52%, NPV 97.8%). There was significant correlation between Emean and endometrial thickness (rs= 0.487 $p < 0.05$) as well as Emax and endometrial thickness (rs = 0.465, $p < 0.05$). The best cut-off value of endometrium thickness to differentiate between malignant and non-malignant endometrial disease was 14.5 mm, with sensitivity of 93.3% and specificity of 69.6%. The combination of Emean and endometrial thickness showed 53.1% sensitivity and 97.1% specificity in determining endometrial malignancy. **Conclusion:** Endometrium SWE is a promising diagnostic tool to differentiate malignant and non-malignant endometrium by referring to the Emean and Emax values.