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PRELIMINARY RESULTS FROM A PILOT STUDY TO EVALUATE CHANGES IN THE VAGINAL PRESSURE PROFILE DURING PREGNANCY AND POSTPARTUM USING AN NOVEL INTRA-VAGINAL PRESSURE SENSING DEVICE (IVPSD)

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Introduction:

Pelvic floor dysfunction is a common condition that affects women following childbirth. Various factors can contribute, yet childbirth remains the biggest factor affecting pelvic floor muscle function. Despite this, little is known about the factors at play during pregnancy and childbirth and the associated intravaginal pressures. Objectives: The aim of this study is to determine the changes in the vaginal pressure profile during pregnancy and the postpartum, using a novel intra-vaginal pressure sensor device (IVPSD) to determine the effect of pregnancy and delivery on the pelvic floor.

Methods:

A team in Auckland University developed a novel, wireless pressure sensor array which can record real-time change in pressure profiles both at baseline and during tasks such as voluntary pelvic contraction. In this study, a prospective observational cohort of women had an assessment of the changes in their vaginal pressure profiles throughout pregnancy and the postpartum period using the novel device. Measurements were taken in the first, second, third trimester and at 8-12 weeks postpartum. Women ePAQ-PF questionnaires at their first trimester and postnatal visit, and had an assessment using the Modified Oxford Grading Scale (MOS).

Results:

For the purpose of this evaluation, the intravaginal pressures in the first trimester and the postnatal period were taken into consideration. Preliminary results show a change in pressures between the measurement in the first trimester and those in the postnatal period. This will be correlated with examination findings and scores from the completed patient questionnaires in order to evaluate the effect of pregnancy and childbirth on pelvic floor muscle function.

Conclusion:

This is a preliminary analysis of a pilot study. Results suggest that pregnancy and childbirth have an effect of the intravaginal pressures in women. We hope that this study opens discussions and gives further insight into the factors affecting pelvic floor muscle function.