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PELVIC SENSATION IN PREGNANCY

Hypothesis / aims of study

Pelvic floor dysfunction is associated with motor and sensory nerve impairment.⁽¹⁾ Motor nerves are injured during childbirth and this is likely to be true for sensory nerves.⁽²⁾ However before the effect of childbirth can be investigated, it is important to understand how pregnancy alone affects pelvic sensation.

This original study aimed to investigate sensation in pregnancy compared to previously published normative data in non-pregnant women.⁽³⁾

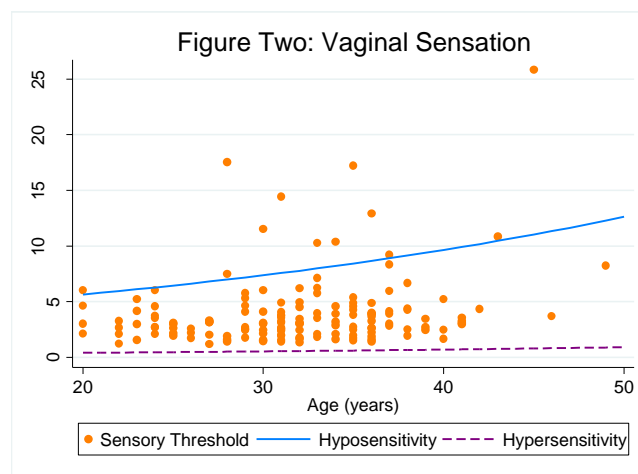
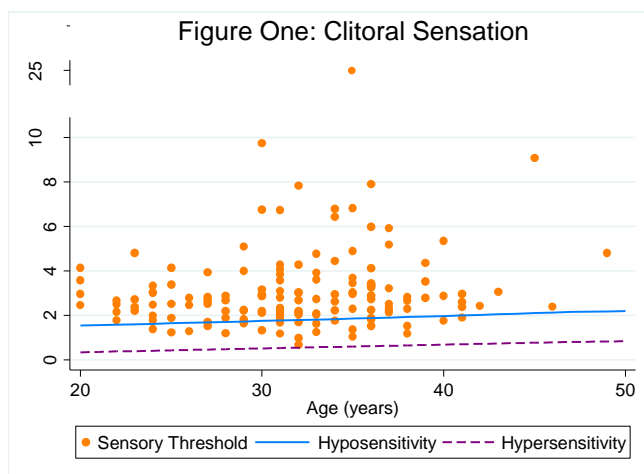
Study design, materials and methods

Women in their first pregnancy were recruited from the antenatal clinic at a tertiary hospital. Exclusion criteria included genital mutilation and pre-existing neurological impairment.

Women underwent neurophysiological assessment using quantitative sensory testing (QST) at the index finger, lower third of the vagina and clitoris for vibration sensation in the third trimester. QST uses a strict protocol to examine the minimum stimulus, or sensation threshold, needed for a subject to perceive a sensation, with vibration assessing large myelinated A β nerve function.

Results

150 women aged between 20 and 49 years (31.82 \pm 5.61) were tested and results compared to normative data in non-pregnant women. Hyposensitivity was detected in 40.6% of women at the finger, 8.0% at the vagina and 83.3% at the clitoris. All women with vaginal hyposensitivity also demonstrated clitoral hyposensitivity. There were no cases of hypersensitivity. There was no correlation between gestation at testing (median 32 weeks, range 28-40) and sensation threshold at the finger, vagina or clitoris (p -value = 0.720, 0.943 and 0.806 respectively).



Interpretation of results

The majority of pregnant women demonstrate clitoral hyposensitivity, but vaginal sensation is normal in 90% of cases. Peripheral sensation is also impaired in 40% of women.

One possible explanation is the additional extravascular fluid of pregnancy causes nerve compression, although the vaginal sparing suggests this occurs as the clitoral nerve traverses the inferior pubic rami rather than in Alcock's canal. An alternative explanation is the centrally mediated neuromodulatory effects of circulating progestogens. The absence of an association with gestation suggests nerve compression from head engagement is not a factor.

Concluding message

Further research is needed to evaluate the causes for altered sensation in pregnancy and influences on return to normal post-partum.

References

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Disclosures

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