

The posterior pelvic pain provocation test in pregnant women

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Summary. This study was done to evaluate a new, simple, non-invasive pain provocation test as an aid to differentiate between low-back and posterior pelvic pain in pregnant women. The test was performed on 72 pregnant women at various stages of pregnancy with or without low-back or posterior pelvic pain. The study was conducted by two physiotherapists with special interest in back pain in pregnancy at a normal antenatal clinic. The test was easy to learn, perform and interpret and was applicable throughout pregnancy. There was a strong correlation between a positive test answer and a history of posterior pelvic pain ($P < 0.01$, chi-square). There were no side-effects. The test was highly specific and had a high positive prediction value for posterior pelvic pain and a high negative prediction value for low-back pain among pregnant women.

Key words: Back pain – Pregnancy – Pain provocation test

Back pain is common in normal pregnancy. More than 50% of all women experience some kind of back pain during pregnancy [4, 6, 9], and classification into high-back, low-back and posterior pelvic pain has been suggested [8]. Earlier studies have shown that for a successful treatment of back pain during pregnancy it is crucial to distinguish especially between low-back and posterior pelvic pain [9]. At a glance these two conditions may share many characteristics in clinical status as well as in history, and therefore pregnant women with any type of back pain often have been given the same kind of treatment or, more commonly, no treatment at all. Furthermore, some pregnant women suffer from both types of pain, which complicates the situation. While low-back pain in pregnancy does not appear to differ substantially from the back pain well-known in the general population [6, 9], posterior pelvic pain is seldom found in men or among women who have never been pregnant and seems to be connected with the pregnancy hormones oestrogen and relaxin [7]. Thus, these two different conditions should not be treated in the same way.

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Posterior pelvic pain cannot be related in a simple way to increased movement in the pelvic joints [11], and it is not known, from which anatomical structures posterior pelvic pain arises. Some authors point to the sacroiliac joints [1, 12, 13], and many different tests for diagnosing sacroiliac pain have been described, but controlled reliability studies have shown a specificity below 50% for these tests [10].

In our work with back pain in pregnant women, we have found it important to differentiate between low-back and posterior pelvic pain. Empirically, there is a correlation between a history of posterior pelvic pain and the type of pain the women felt when a simple posterior pelvic pain provocation test (pppp-test) was performed. The aim of this study was to evaluate a simple pain provocation test, without identifying the anatomical structure responsible for the pain reaction.

Patients and methods

For 2 days all pregnant women who visited one specific antenatal unit in Göteborg in Sweden were asked to participate in the study. Two specially trained physiotherapists questioned and examined the women. A standardized examination and history protocol concerning pain history and pain locations was used by the first physiotherapist, and the women were classified as having a history of posterior pelvic pain, low-back pain, other types of back pain or no pain at all.

A history of posterior pelvic pain was defined as follows:

- A history of time- and weight-bearing-related pain in the posterior pelvis, deep in the gluteal area [8]
- Great difficulty when turning over in bed
- Pain-free intervals
- A pain distribution with stabbing in the gluteal area distal and lateral to the L5–S1 region, with or without radiation to the posterior thigh or knee, but seldom to the calf and never to the foot [8]
- Free movements in the hips and spine and no nerve root syndrome
- The pain was experienced for the first time during a pregnancy

All criteria had to be present. Pain in the symphysis was not considered relevant.

A history of low-back pain was defined as follows:

- Pain in the lumbar spine area with reduced or painful motion with or without radiation into the calf or foot
- Tenderness of the back muscles
- The pain had normally been experienced before the first pregnancy