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The mechanical effect of a pelvic belt in patients with pregnancy-related pelvic pain.

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BACKGROUND: Many patients with pregnancy-related pelvic girdle pain experience relief of pain when using a pelvic belt, which makes its use a common part of the
therapy, but there is no in vivo proof of the mechanical effect of the application of a pelvic belt.
METHODS: The influence of a pelvic belt on sacroiliac joint laxity values was tested in 25 subjects with pregnancy-related pelvic girdle pain by means of Doppler imaging of vibrations in prone position with and without the application of a pelvic belt. The belt was adjusted just below the anterior superior iliac spines (high position) and at the level of the pubic symphysis (low position).
FINDINGS: Sacroiliac joint laxity values decreased significantly during both applications of a pelvic belt ($P<0.001$). The application of a pelvic belt in high
position decreased sacroiliac joint laxity to a significantly greater degree than
the application of a belt in low position ($P=0.006$). The decrease of laxity significantly correlated with the decrease of the score on the active straight leg raise test ($r=0.57$ for the low position, $P=0.003$ and $r=0.54$ for the high position, $P=0.005$).
INTERPRETATION: Application of a pelvic belt significantly decreases mobility of the sacroiliac joints. The decrease of mobility is larger with the belt positioned just caudal to the anterior superior iliac spines than at the level of
the pubic symphysis. The findings are in line with the biomechanical predictions and might be the basis for clinical studies about the use of pelvic belts in pregnancy-related pelvic girdle pain.

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