TREATMENT MODALITIES FOR PELVIC GIRDLE PAIN IN PREGNANT WOMEN

Akademisk avhandling

Som för avläggande av medicine doktorsavhandling vid Göteborgs Universitet kommer att offentligen försvaras i aulan, Kvinnokliniken, Sahlgrenska Universitetssjukhuset/ Östra, Göteborg
Fredagen den 18 april, 2008, kl 09.00

av

Helen Elden

Fakultetsopponent
Docent Jan Brynhildsen
Institutionen för Klinisk och
Experimentell Medicin
Hälsouniversitetet i Linköping

Handledare:
Professor Henrik Hagberg
Docent Hans-Christian Östgaard
Leg. Läkare, MD Lars Ladfors
Institutionen för Kliniska Vetenskaper
Sahlgrenska Akademin
Göteborgs Universitet

Avhandlingen baseras på följande delarbeten:

I **Elden H, Ladfors L, Olsen MF, Ostgaard HC, Hagberg H**. Effects of acupuncture and stabilising exercises as adjunct to standard treatment in pregnant women with pelvic girdle pain: randomised single blind controlled trial. *BMJ* 2005;330 (7494):761-764.

II **Elden H, Ostgaard HC, Olsen MF, Ladfors L, Hagberg H.** Treatment of pelvic girdle pain with acupuncture: adverse effects during pregnancy and delivery. *Submitted*

III **Elden H, Hagberg H, Olsen MF, Ladfors L, Ostgaard HC**. Regression of pelvic girdle pain after delivery: follow- up of a randomized single blind controlled trial with different treatment modalities. *Acta Obstet Gyn Scand*. 2008; 87: 201-208

IV **Elden H, Olsen MF, Ostgaard HC, Stener-Victorin E, Hagberg H.** Acupuncture as an adjunct to standard treatment for pelvic girdle pain in pregnant women: randomised double blind controlled trial comparing acupuncture with non-penetrating sham acupuncture. *Submitted*

ABSTRACT

TREATMENT MODALITIES FOR PELVIC GIRDLE PAIN IN PREGNANT WOMEN

Helen Elden

Department of Obstetrics and Gynaecology. The Institute for Clinical Sciences, Sahlgrenska Academy, Göteborg University, Göteborg, Sweden

BACKGROUND: Pelvic girdle pain (PGP) affects about 20% of pregnant women. It causes great suffering for the individual and high costs for society. Persisting PGP have been reported in 10 to 75% three months after pregnancy and some women have also stated that PGP has been the beginning of a chronic condition. Risk factors for PGP are history of low back pain, history of PGP or trauma to the pelvis. Available evidence of research of treatment for the condition is insufficient to recommend any particular treatment modality for PGP. Also, the use of acupuncture for PGP is sparse due to insufficient documentation of adverse effects of this treatment in this specific condition. The main purpose of this thesis was to study efficacy, safety and post pregnancy effects of standard treatment, acupuncture and stabilising exercises given to pregnant women with PGP. Based on this knowledge, our ultimate aim is to increase our knowledge about treatment of PGP. **METHODS:** Paper I reports on a randomised single-blind trial comparing efficacy of standard treatment plus acupuncture, standard treatment plus stabilising exercises and standard treatment alone in 386 pregnant women with diagnosed PGP. Paper II is a follow up study of the original randomised trial in which adverse effects during pregnancy and delivery, influence on the mother, fetus, pregnancy and the pregnancy outcome are reported. Paper III describes regression of PGP during 12 weeks after pregnancy among these women. Paper IV reports on a double-blind randomised trial in which effects of penetrating acupuncture and non-penetrating sham acupuncture as adjunct to standard treatment are compared in 115 pregnant women with diagnosed PGP. The aim with this study was to investigate if specific treatment effects of penetrating acupuncture go beyond effects of non-specific effects and individual attention. **RESULTS: A**cupuncture as well as stabilising exercises as adjunct to standard treatment constituted efficient complements to standard treatment for the management of PGP during pregnancy. Acupuncture administered with a stimulation that may be considered strong lead to minor adverse complaints on the mothers but had no observable severe adverse influences on the pregnancy, mother, delivery or the fetus/ neonate. Regression of PGP after delivery was excellent with no differences in recovery between the three treatment groups. Both penetrating acupuncture and non-penetrating sham acupuncture lead to clinically relevant decrease of median pain after treatment but there were no significant difference between groups. Those who had received penetrating acupuncture were in regular work to a higher extent than those women that received non-penetrating sham acupuncture. The penetrating acupuncture group had superior ability in 7 of 13 daily activities (dressing; outdoor walks; climbing stairs, standing bent over a sink; running; heavy work and lifting heavy objects) than the non-penetrating sham acupuncture group. **CONCLUSION:** We have shown that acupuncture and stabilizing exercises as adjunct to standard treatment are effective for PGP during pregnancy. Even if our study was of insufficient size to exclude negative effects on delivery, perinatal morbidity and mortality as well as on CTG the study result adds support to the view that acupuncture even with stimulation that may be considered as strong is not accompanied by any severe adverse influences on the pregnant women or the fetus/neonate. Even if more studies are required, our data provides the most comprehensive data reported to date. Our data suggest that irrespective of treatment modality, regression of PGP occurs in the great majority of women within 12 weeks after delivery. Penetrating acupuncture had no additional effect on PGP reduction compared to non-penetrating sham acupuncture but it improved the ability to perform daily activities keeping more women in regular work. Thus, the data imply that needle penetration contributes to the previously reported beneficial effects of acupuncture. **KEY WORDS:** Pelvic girdle pain**,** pregnancy, acupuncture, non-penetrating sham acupuncture, stabilising exercises, randomised controlled trial. ISBN: 978-91-628-7456-8