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Birth ball for Pregnant Women in Labour: Preliminary result of a multi-centre randomised controlled trial

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Introduction

Evidence for the use of birth ball for pregnant mothers and related childbirth outcomes is scarce. There are only three small-scale randomized controlled trials (RCT) were done in Spain, Taiwan and Iran. In Hong Kong, three observational studies 4-6 on acceptability of using birth ball during labour had been conducted showing high acceptability and satisfaction (> 90%) of Chinese women in public hospitals. Evidence of effectiveness of birth ball from large and scientifically rigorous RCT is lacking to guide practice.

Objectives

To evaluate the effectiveness and safety of birth ball use by pregnant women in labour compared to usual pain relief methods.

Methodology

This is a multi-centre, two-arm (control and birth ball), stratified block-randomised controlled trial. Women with low-risk singleton pregnancy at term admitted for labour and vaginal delivery in Prince of Wales Hospital, Princess Margaret Hospital, and Pamela Youde Nethersole Eastern Hospital are invited to participate. The expected sample size is 960. Subjects in the intervention group receive instructions on birth ball exercises and supervision, by midwives with certified birth ball training. Control group subjects receive institutional usual midwifery care without the midwives actively teaching them the use of birth ball.

Result

Seventy six subjects have been recruited and completed this study between 1 March and 31 May 2016, among them 37 were allocated to intervention and 39 in control group. Subjects in the intervention group had shorter duration of first ($p = 0.028$) and second stage ($p = 0.031$) of labour. This was consistent with the two previous studies in Taiwan and Hong Kong. We adopted an intention-to-treat analysis (ITT) and did not observe any statistically significant difference in pain intensity on admission, cervical dilation 4 cm, 8 cm and 10 cm; satisfaction in pain relief and childbirth experience; and sense of control in labour between intervention and control group. No record of fall accident.