

#675: Association between the performance of pelvic floor muscle exercise in the prenatal period and mode of delivery in patients of the northern area of the island of Gran Canaria. Multidisciplinary approach to childbirth.

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Introduction

Regular and standard physical activities during pregnancy may reduce the risk of caesarean section in pregnant women (1). Despite the fact that pregnancy is associated with profound anatomical and physiological changes, exercise has minimal risks and known benefits for most women. An adequate exercise program during pregnancy influences the mode of delivery, increasing the possibility of a vaginal delivery (2). Therefore, antenatal pelvic floor muscle exercises are recommended as a safety and inexpensive strategy for lowering caesarean section rates (3).

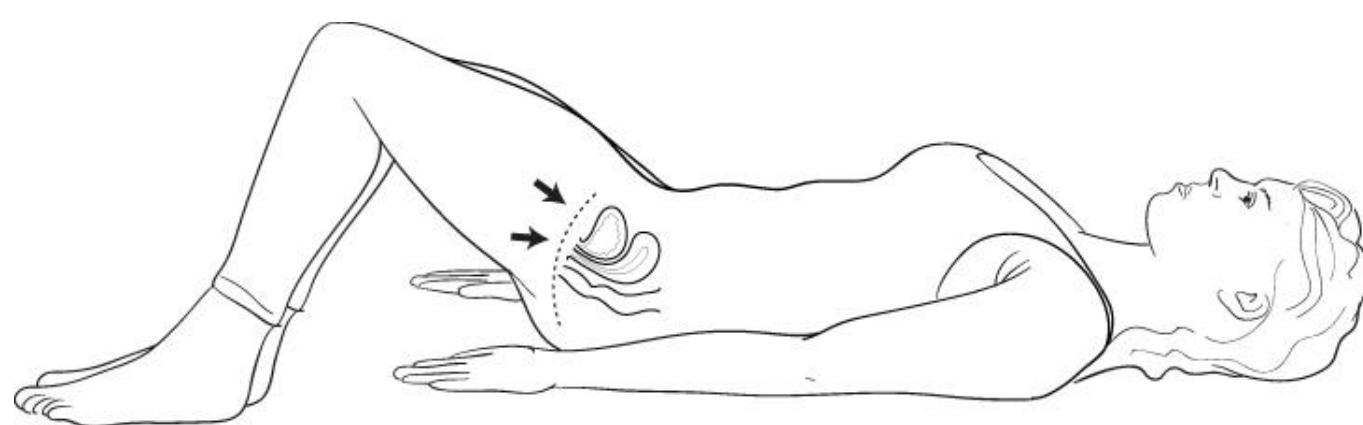
Aim

To analyze the obstetric and perinatal outcomes of those patients who received assessment and treatment in the Pelvic Floor Unit of the Rehabilitation Department during their pregnancy, and to compare them to the overall obstetric and perinatal outcomes of their general population at an Obstetric tertiary unit.

Methods and Materials

Retrospective descriptive study carried out from January 2017 to December 2018. Inclusion criteria were all singleton pregnant women followed up by the Pelvic Floor Unit of the Rehabilitation Department of Dr. Negrín University Hospital of Gran Canaria. Obstetrical data was obtained from local electronic database.

In our Department, during that two-year time period, an annual average of 4207 births were attended, with a 10.5% C-section rate and 9.6% of forceps deliveries. The episiotomy rate was 25% (16.5% in normal vaginal deliveries and 88.7% in forceps deliveries), and epidural analgesia was administered in 54% of women with a normal vaginal delivery. Anal sphincter injury was diagnosed in 7.7% of the forceps deliveries and in 1% of the normal vaginal deliveries. The nulliparous average rate was 57.4%. Mean time of the active phase of the second stage of labor was 30 minutes..



Results

A total of 120 patients were included. The main indication for referral were own request in 84.2% of patients and 15.8% due to urinary incontinence. Average number of treatment sessions were 10.2. All newborns had an Apgar score greater than 7 and an umbilical arterial pH greater than 7.0. 4% of newborns were admitted to the Neonatal Intensive Care Unit either due to prematurity and/or low birth weight.

	Rehabilitation group	General population
Average age	35 years (26-49)	
Mild or moderate sport activity	82.5%	
No sport	16.7%	
Non-smokers	94.2%	
Nulliparous	60.8%	
Previous C-section	2.5%	
Mean weight gained during pregnancy	11.6 kg	
Mean gestational age at delivery	39 weeks	
Average birthweight	3238g	
Epidural	55.8%	
Average active phase of the 2nd stage of labour	30,44 mins	30 mins
Normal vaginal delivery	81.7%	79,90%
Forceps delivery	10.8%	10.5%
C-section	7.5%	9.6%
Episiotomy	25.9%	25%
III/IV degree tear	4%	1.9%
Epidural	55.8%	54%
Nuliparous	60.8%	57.4%

Table 1 Outcome of the Rehabilitation group and comparison between Rehabilitation and the general population and obstetrical data (duration of labour, mode of delivery birth related trauma, epidural and parity).

Interpretation of results

We found that those that received rehabilitation showed a lower C-section rate however this was not statistically significant. No differences were found between the rehabilitation group and the general population group in terms of mean gestational age, forceps delivery, third and fourth degree tears, time of the second stage of labor, perinatal outcome and episiotomy. However, the potential benefit of rehabilitation may have been underpowered in this study. Rehabilitation may not have a potential obvious effect in a Department with optimal and adjusted rates of cesarean section and forceps delivery with associated optimal perinatal outcome.

Conclusions

No differences were in mode of delivery, episiotomy rate, perineal tears, perinatal outcome and time of second stage of labor in those pregnant women that followed a pelvic floor exercise program and those from the general population.

Further study will be needed to look at whether pelvic floor exercises during pregnancy has a positive effect on postpartum recovery. Also, larger multicenter prospective studies are needed to study the potential effect of rehabilitation in patients from obstetrical practices with different C-section and instrumental delivery rates.

References

1. Taiwan J Obstet Gynecol. 2018 Feb;57(1):18-22.
2. Einstein (Sao Paulo). 2012 Oct-Dec;10(4):409-14.
3. Integr Med Int 2017;4:187-197