

Coccydynia and Disability on Postpartum Vaginal Delivery Women

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Abstract

Background and Objective: Coccydynia is strain or discomfort in the area of coccyx. The common causes are trauma in the gluteal region, repetitive microtrauma, or childbirth. Delivery through vagina is often related to damage of sacrococcygeal ligaments and progress of the fetus through the birth canal may cause acute damage to the coccyx, this can be further provoked by forceps delivery. Although tension and damage of ligaments attached to coccyx have been thought to be the general cause for coccydynia occurring after childbirth. A study was conducted in France on postpartum women with coccydynia have concluded that 7.3% of cases of coccydynia in female related after delivery. Hence, this study was taken with an intention to find the coccydynia and disability on vaginal delivery postpartum women.

Method: An observational study was conducted on 378 vaginal delivery postpartum women in Saveetha Medical College and Hospital, Chennai. This study was done by using Oswestry Questionnaire for disability and examination for coccydynia between the age of 20 and 40 years of postpartum vaginal delivery women.

Results: Among 378 postpartum women 196 have coccydynia with age from 20 to 40 years. The postpartum women according to Oswestry Scoring 96 women were in moderate disability, 69 women were in severe disability and 31 women were crippled.

Conclusion: From the results it was concluded that coccydynia and disability on postpartum vaginal delivery women was 51 percent.

Keywords

Coccydynia, episiotomy, forceps delivery, post-partum women.

Introduction

Coccydynia, or coccygodynia, is a strain or discomfort in the area of coccyx (Simpson 1859). Coccyx is a triangular bone made one of 3 to 5 fused segments, largest of which communicates with the lowest sacral segment Coccyx is the end segment of the spine hence it affects females five times more than male (Nathan et al., 2010). The most common cause of

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coccydynia is trauma as a result of deterioration on the glutes, repetitive microtrauma, or childbirth (Patijn et al., 2010).

Pain within the coccyx region also can be referred from the lumbar spine, pelvic floor muscles, degenerative discs, neoplasms, bony spurs, cysts, or infections, although some cases are reported to be idiopathic (Howard et al., 2013). The most common etiology of coccydynia is external or internal trauma. External trauma usually occurs due to a backwards fall, leading to a bruised, dislocated, or broken coccyx (Schapiro 1950). The first coccygeal segment carries primary articular processes called the coccygeal cornua that articulate with the sacral cornua. The lower part of the filum terminale, also known coccygeal ligament, inserts in this first segment.

Coccyx bordered anteriorly by levator ani muscle and sacrococcygeal ligament. going anteriorly to posteriorly, lateral edges serve as insertion sites for coccygeal muscles, sacrospinous ligament, sacrotuberous ligament, and fibers of gluteus maximus muscle. Inferiorly, iliococcygeus muscle tendon inserts into the tip of coccyx. These ligaments and muscles support the pelvic floor and also put up voluntary bowel control (Lirette et al., 2014). The coccyx carries more weight when the seated person is leaning backward; hence, many patients with coccydynia sit leaning forward (flexing at the lumbosacral and hip regions), which shifts more weight to bilateral ischium rather than the coccyx. Instead, patients with coccydynia may sit leaning toward one side so the body weight is spent mainly on one ischial tuberosity, with less pressure on the coccyx (Lirette et al., 2014).

Numerous women were discovered to be irritated by labor, Hormonal changes in a lady's body during growth change the real actual design of tendons and joints, including coccyx. It is loose and extricated to work with a simpler birth, this trade may in some cases bring about coccygeal injury or coccygeal pain (Kaushal et al., 2005). Childbirth is often related to damage of sacrococcygeal ligaments during vaginal delivery and progress of the fetus through the birth canal may cause acute damage to the coccyx, this can be further provoked by forceps delivery. Although tension and damage of ligaments attached to the coccyx have been thought to be the general cause for coccydynia occurring after childbirth (Sapsford 1998). For woman after delivery, specific guidance and considerations may need to be given in relation to her posture, position and comfort, mainly during breastfeeding. Modern furniture, does not ease a good breastfeeding posture while seated. The furniture may be too soft to encourage women to lean into the wrong position which will put pressure on the coccyx (Ryder et al., 2000).

Manual treatments involve either manipulations of coccyx or massages of the pelvic muscles (levator ani or piriformis). Manipulations consist in mobilizations of the coccyx and stretching of attached muscles in a rectal finger (Maigne et al., 2000). Ultrasound is one of several rehabilitation interventions suggested for the management of pain and it is one of the most frequently used modalities by physiotherapist for treatment of painful conditions (Mardiman et al., 1995). A study was done by (Maigne et al., 2012) in Paris, France upon women who were suffering from postpartum coccydynia have concluded that 7.3% of cases of coccydynia in female were related after delivery. The objective of this study was to find coccydynia and disability on postpartum women with vaginal delivery.

Material and Methods

A total of 378 postpartum women were selected from Saveetha Medical College and Hospital. Women were selected based on inclusion criteria of age 20-40 years, coccydynia pain post vaginal delivery. Exclusion criteria of lower segment cesarian section, back pain before pregnancy due to past history/surgical history of back injuries & use of pain medication. Detailed explanation was given to women about study and written informed consent was obtained from patients.

Among the subjects taken, history was collected along with clinical features and physical examination was done to shortlist 196 women with coccydynia. The questionnaire was distributed among patients through forms and verbal commands. This questionnaire took approximately 15mins to complete. During the postpartum days, 378 women completed the questionnaire includes name, age, as the demographic variables and items on obstetrics (i.e., number of pregnancies and deliveries) and special items (i.e., coccygeal pain after first pregnancy, coccyx pain in current pregnancy and after delivery).

This questionnaire consists of 10 questions out of 8 questions were included for this study. The Oswestry questionnaire were distributed to 378 women. The ODI (The Oswestry Disability Index) covers 1 item on pain and 6 items on activities of daily living (personal care, walking, sitting, standing, sleeping, social life). In this study 378 postpartum women were assessed by the above-mentioned scoring interpretation of ODI.

Results

On screening 378 postpartum women with Oswestry Low Back Pain Disability questionnaires, 196 women was diagnosed with coccydynia during the postpartum period. The 196 postpartum women age from 20 to 40 years. The coccydynia and disability in postpartum women is at 51% after delivery. According to Oswestry scoring, 96 (49%) women were Moderate disability, 69 (35%) women were severe disability and 31(16%) women were crippled. The Table 1 describes the distribution of women by ODI score. The moderate disability of 96 women with the mean \pm 30.83 and SD \pm 5.61, 69 severe disability women with the mean \pm 50.36 and SD \pm 5.72 and crippled women showed the mean \pm 70.35 and SD \pm 5.61.

Table 1. Distribution of women by ODI score

ODI SCORE	NO OF WOMEN'S (n = 196)	PERCENTAGE
21% - 40% (Moderate Disability)	96	49%
41% - 60% (Severe Disability)	69	35%
61% - 80% (Crippled)	31	16%

Discussion

The purpose of the study is to find out the coccydynia and disability on postpartum vaginal delivery women on screening 378 postpartum women with Oswestry Disability questionnaires, 196 women have a coccydynia during the postpartum period. The 196 postpartum women age from 20 to 40 years. The women were based on moderate, crippled, severe disability. The Oswestry scoring shows that severity of disability in postpartum vaginal delivery women was moderate 49% and severe disability was 35% and crippled was 16%.

Women play a very important role in a family and her health cannot be compromised. When a woman becomes a mother, her workload such as breast-feeding a child, taking care of the child and doing house chores increases. If coccydynia is not diagnosed early it might lead to chronic pain. So, it is important to rule out coccydynia in every postpartum women. Coccydynia on postpartum vaginal delivery women is 51%. According to Reza Maulana et al. (2015), postpartum coccydynia appears to be associated with difficult deliveries. Luxation and fracture of the coccyx are the two most common lesion of postpartum coccydynia. Maigne et al. (2000) have explained that obesity was found to be a risk factor. The body mass index determines the way a subject sits down, and lesion patterns were different in obese, normal-weight, and thin patients.

This study was conducted to find coccydynia and disability on postpartum vaginal delivery women. Existence of high risk for coccydynia, women should be aware of postural changes during pregnancy and lifestyle modifications in order to decrease their risk of developing coccydynia. This will ultimately lead to better quality of health.

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