

PREVALENCE OF COCCYDYNIA IN WOMEN DURING POSTPARTUM PERIOD

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ABSTRACT:

Introduction:

Coccydynia also familiar as coccygodynia, coccygeal pain, caoccalgia which implies at the lowest part of spine, the coccyx. There is a noticeable pain in and around the coccyx mainly caused by childbirth pressure. In general, relaxants and other hormones are responsible as they can cause stretching and relaxation of pelvic floor and move or can rotate the coccyx to cause pain. It can also be due to sudden impact on coccyx due to fall, repetitive trauma of ligaments and muscles attached with coccyx, partial dislocation of coccyx, and sacrococcygeal synchondrosis due to abnormal movement of coccyx from excessive sitting, overweight or underweight, aging, infection and sometimes due to tumor. It is more common in postpartum women of increased body mass index and those who had more than one normal delivery.

Objectives:

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The aim of our study was the review of literature to ascertain the prevalence of coccydynia in women during postpartum period.

Methodology:

This was an observational study and 300 postpartum women from different cities of Punjab were investigated according to the content of self-inscribed questionnaire. Purposive sampling technique was used in study on the base of inclusive criteria.

Results:

57% of postpartum women experienced the pain in coccyx. Obesity was discovered as the major risk factor in the women who suffered from coccydynia. Chances of coccydynia were increased with increasing number of normal deliveries and trauma during forceps delivery.

Conclusion:

Findings revealed that postpartum coccydynia most commonly occur in the women with increased body mass index, ligament laxity due to hormonal effect and mostly in those women who experienced trauma during normal delivery mainly by forceps. Therefore, prevalence of coccydynia is increased in postpartum period in age group 25-40 years.

Key words: *coccydynia, postpartum period, coccydynia pain*

INTRODUCTION:

Coccydynia is a pain in coccyx and is a medical term also known as “Tailbone pain” triggered while sitting. Coccydynia or Coccygodynia term was first introduced by Simpson in 1859. (1). Coccyx has its origin from a Greek Word used for “cuckoo bird’s beak” resembling it when seen from side.(2) Coccydynia is presented as intense focal pain and ranges from deep ache or pressure sensitivity to sensation of “sitting on a knife” or “being impaled on a garden cane”. Depression, exhaustion and even planter fasciitis may arise with coccydynia and decreases the quality of life of a person (3) Female gender is the most important factor responsible for coccydynia (1) Pregnancy, in specific, places a vast burden on the region as the fetus adjusts inside the pelvis .Coccyx relaxes and slacks to ease child birth thus leads to coccygeal injury and coccydynia. In postnatal coccydynia, pain occur promptly after birth as soon as sitting position is assumed. Vicinity of coccyx makes it more vulnerable to interior and exterior damage during child birth. (4) Coccydynia most commonly occur around the age of 35 and 40 years and prevalence are five times greater in women. The risk is higher in women with increased body mass index (5) Prevalence of musculoskeletal dysfunction are more common in pregnant women.261 women participated in the study and filled the questionnaire. 64.6%reported calf muscle cramps,37.1%reported foot pain, and 33.7%experienced low back pain,1.5% reported coccydynia in second trimester and 1.7% experienced coccydynia in third trimester

(6). Coccydynia accounts less than 1% of all back bone and five times more prevalent in women because coccyx bone is more prominent in women A study of 2000 cases of back pain referred to hospital found that 2.7% diagnosed as coccydynia. There is no ethnicity and race association with coccydynia (6) Pain occurs in coccyx and its surrounding. Pain is provoked by standing up from sitting. Coccyx movement is abnormal which may initiate a chronic inflammatory process which may lead to coccyx degeneration. Tenderness is present over the coccyx .Pain worsens with constipation and it is relieved by bowel movement .Sexual intercourse may complicate the symptoms. (7)

Non surgically, Analgesics, ring shaped pillows, physiotherapy, Levator anii massage technique, levator anii stretch, rectal massage, local steroid injection, long-acting local anesthetics are used for pain relief. Coccygectomy is performed, in which patient lies prone with hip & knee semi flexed. 8-10cm incision is made to expose coccyx. Second procedure is removal of motor segment of coccyx. (8) Radio frequency thermoregulation, radio frequency lesioning done at 80°C for 120 seconds no extra medication given. Blockage of impaired ganglion, lowest node in paravertebral sympathetic chain relieves chronic pain, cryoablation. (9) Piriformis stretches and hands to feet stretch, can relief stress off the muscles around the coccyx. Osteopathic manipulative treatment, effects of stability ball exercise program concluded that exercises have improved activities of daily living and reduced pain due to coccydynia. Core stability exercises produced better outcomes as compare to wearing maternity support belts. Exercises of low intensity may also lessen pain. Pelvic floor muscles strengthening is also helpful.(10) Conservative therapies including ice packs cushions ("doughnut" or "wedge"), acupuncture coma oral medications (NSAIDs, tricyclic antidepressants, opiates, gabapentin) simply avoiding exacerbating activities. Epidural steroid injections, myofascial release, external and internal manual manipulation and "last resort" option coccygectomy is done to get relieve from coccydynia (3) Wearing low heeled shoes with arch support, sit in chair with good back support, sleep on the side with pillows between the knees and applying heat cold & massage to painful area can relieve symptoms of coccydynia. If it is necessary to sit or stand for prolonged period taking breaks and placing one foot on a low stool relieves pressure on the coccyx. Rest, exercise and complimentary medications can be use as additional interventions.(11) The study assisted to get awareness about prevalence of coccydynia among postpartum women as well as various risk factors leading coccydynia. It was helpful to understand difference between low back pain and pain in tailbone and it also provided the knowledge about the possible treatment options of coccydynia.

MATERIALS AND METHODS:

SUBJECTS: Our sampling technique was purposive sampling. The duration of study was from February 2019 to August 2019. Study was conducted on a group of 300 individuals comprising of prevalence of coccydynia in postpartum women. Study was carried out in different cities of Punjab, Pakistan. Self-made questionnaire was generated which include demographic data, postpartum histories, risk

factors etc.). The inclusion criteria were Postpartum women, Duration of postpartum < 4 months, Age: 25-40 years. The exclusion criteria were Fall fracture, Osteoarthritis, carcinoma of uterus, Carcinoma of rectum, Ankylosing spondylitis, Sciatica, Rheumatoid Arthritis. A total of 300 postpartum women from different cities of Punjab participated in this study. Out of 300 participants, 172 had coccydynia. We executed our research procedure with honesty and truthfulness. We took intimate care of ethical limits by maintaining confidentiality of the collected data. We got consent form signed from participants who were confined in our sample. We made personal information completely confidential.

Once we determined the participants', self-developed questionnaire was used. Informed consent was obtained from the participants in this study and questionnaire was filled by researchers as majority of the participants were illiterate. Participants were made aware of the ethical concerns and they were assured of confidentiality at all times. The questionnaires were collected immediately after competition. Participants were also assured that all their answers would remain strictly anonymous and also that they had the right to withdraw from participation at any time. The present study examined the Prevalence of coccydynia in postpartum women of age group 25-40 years.

DATA ANALYSIS

Data was analyzed and compiled through SPSS (Statistical Package for Social Sciences) and presented in graphical and tabular form for better understanding.

RESULTS:

The data related to socio-demographic status including age, pregnancy, number of deliveries, number of caesarian sections, the mean age of participants was 32 years. The study showed that 64.7% women had multiple pregnancies (more than 2). This graph showed that 230 women had more than one normal delivery and 60% of them experienced coccydynia. These results revealed that 42% of the women had one C-section. Our data showed fewer history of abortion, 35% had more than 1 abortion. These results showed that 53.7% trauma occurred during forceps delivery. Our data showed that 41.7% women experienced chronic pain for more than 3 months, 28.7% had pain for 2 months, 15% had for 1 month and 14.7% had pain for 3 months.

Graph showed that 41% of the women suffered from moderate pain, 22% had mild pain, 13.3% had severe pain and 23.7% had no pain at all in coccyx. **(Figure. No. 1)**

This graph showed that 71% used soft surface, 26% used hard surface and 3% used air filled cushion for sitting. **(Figure. No. 2)**

This table showed that only 33.7% women have pain during bowel movement and abdominal discomfort. **(Table. No. 1)**

Our data showed that 58.3% women have history of low back pain during pregnancy. (Table. No. 2)

DISCUSSION:

Coccydynia is a neglected topic as previous data was deficient to explain the problem and its causative factors especially in woman due to normal physiological changes and risk factor during pregnancy and childbirth. Moreover women do not pay any attention towards its complication, possible aggravating factors and treatment; considering it to an untreatable conditions. So there was need of research to provide better knowledge of condition.

Prevalence of obesity and its complications especially considering with postpartum. Complications were investigated in current study; for this purpose BMI was calculated and interpreted by comparing with BMI chart. It was estimated that women who were obese had more coccygeal pain as compare to normal weight women; it was also declared that women who had high BMI are more at risk of suffering coccydynia.

The ratio of women suffering from coccydynia in postpartum period was two times greater in women who were obese, this eventually associated us to the fact of increased body mass index, as increased body mass index may induce prolific threat of injury to the coccyx and may predicate in rotation of the coccyx.(4) Coccydynia signifies to the pain in coccyx and is exasperated by prolonged sitting on hard surfaces and sexual intercourse (12) Sitting on hard surfaces for an extended period leads to increased pressure and shearing forces on coccyx, which is painful and may predispose injury to the coccyx, but adhering to our study mostly women used soft surfaces for sitting because of intense pain they confronted by sitting on hard surfaces and to anticipate this condition they inclined forward while sitting and some women were accustomed to air filled cushions by their clinicians(13) An inductive study was carried out to explain the percentage of people executing coccydynia, with different causes. The study implied that most people affected were in third decade and the commonest cause of coccydynia was direct injury to the coccyx. Idiopathic coccydynia was less common (14) Regarding current research on coccydynia, woman having more than one normal deliveries prone to had more coccyx bone malalignment and associated symptoms . The disease was more often in those women who were asserted to forceps delivery as compared to the vacuum extraction. Majority of the cases encountered were after second or third pregnancies. The number the normal deliveries, number of c-section, trauma during childbirth, forceps delivery, history of fall, pain during bowel movement and abdominal discomfort, constipation, low back pain during pregnancy, but postpartum coccydynia was founded most commonly with women of increased body mass index, fall during pregnancy, ligament laxity due to hormonal effect and in the main , in those women who experienced trauma during normal delivery chiefly by forceps. Therefore, prevalence of coccydynia is increased in postpartum period (15)

CONCLUSION: Current study concluded that postpartum coccydynia most commonly occur in the women with increased body mass index, ligament laxity due to hormonal effect and mostly in those women who experienced trauma during normal delivery mainly by forceps. Therefore, prevalence of coccydynia is increased in postpartum period in age group 25-40 years.

Participants consent and ethical consideration:

Participants were knowledgeable about the aims & objectives of the study was observed by all individuals and consent form in the written form was obtained.

Consent for research publication

Individuals were familiar about the aims of the research and informed written statement and consent was taken.

Competing interests

There is no competing interest as declared by the author. The results of the research are obtained clearly, fairly, and without assembly, distortion, or misleading data maneuvering.

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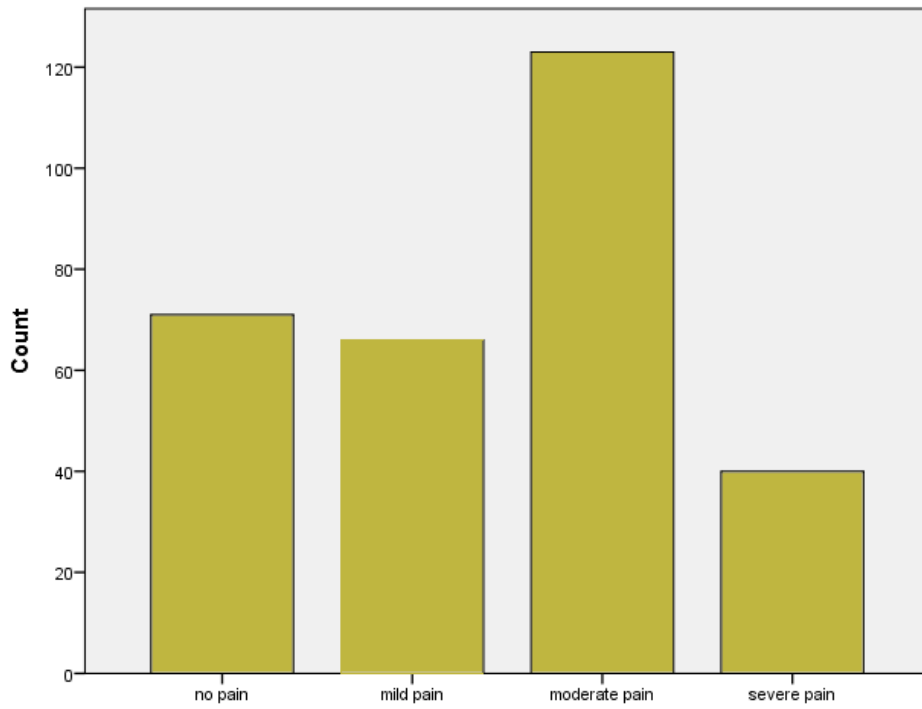


Figure no.1: Intensity of pain

Graph showed that 41% of the women suffered from moderate pain, 22% had mild pain, 13.3% had severe pain and 23.7% had no pain at all in coccyx.

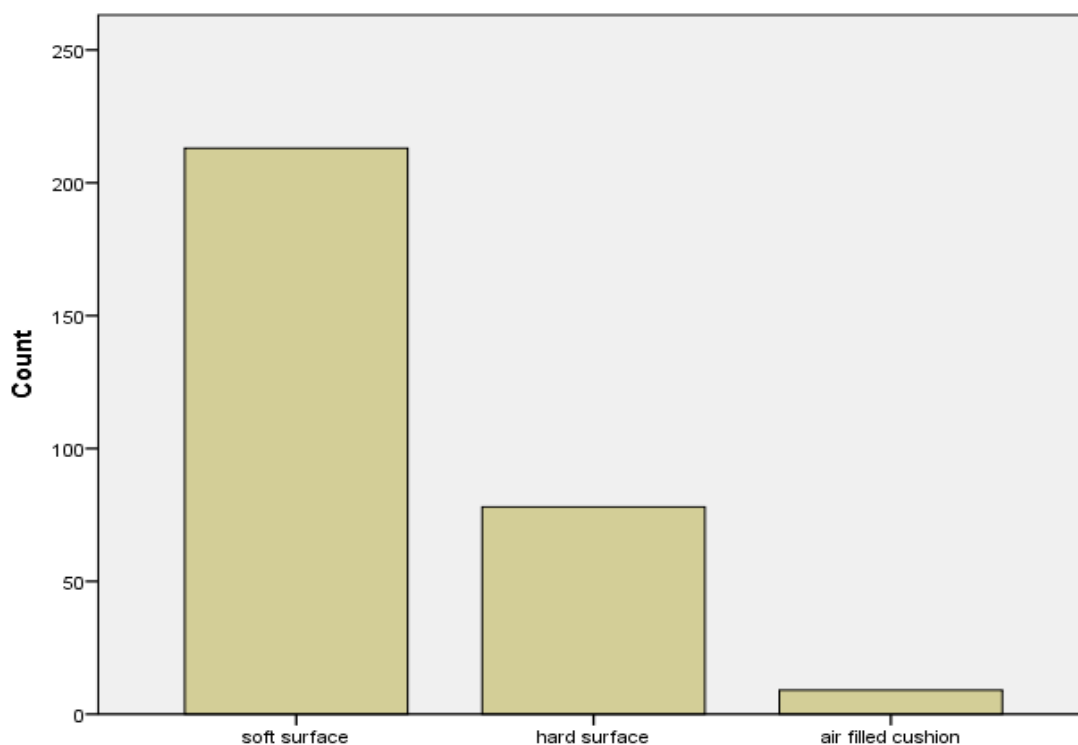


Figure no. 2: Surface used for sitting

This graph showed that 71% used soft surface, 26% used hard surface and 3% used air filled cushion for sitting.

Table.1: Pain during bowel movement and abdominal discomfort

		<i>Frequency</i>	<i>Percent</i>
Valid	<i>yes</i>	<i>101</i>	<i>33.7</i>
	<i>no</i>	<i>199</i>	<i>66.3</i>
	<i>Total</i>	<i>300</i>	<i>100.0</i>

Table No. 2: History of low back pain during pregnancy

		<i>Frequency</i>	<i>Percent</i>
<i>Valid</i>	<i>yes</i>	<i>175</i>	<i>58.3</i>
	<i>no</i>	<i>125</i>	<i>41.7</i>
	<i>Total</i>	<i>300</i>	<i>100.0</i>