



THE THERAPIST

JOURNAL OF THERAPIES & REHABILITATION SCIENCES

<https://thetherapist.com.pk/index.php/tt>

Volume 4, Issue 1 (Jan-Mar 2023)



Original Article

The Prevalence of Coccydynia among Postpartum Females in Allama Iqbal Memorial Teaching Hospital, Sialkot

Saman Shah¹, Sana Muzammil¹, Ghannia Khalid¹, Rameesha Javed¹, Danyal Ahmed¹, Faiza Altaf¹ and Amna Khalid^{2*}

¹Department of Health Sciences, University of Management and Technology, Sialkot, Pakistan

²Faculty of Medical Sciences, Government College University Faisalabad, Faisalabad, Pakistan

ARTICLE INFO

Key Words:

Coccydynia, Postpartum Females, Tail Bone, Breastfeeding, C-section, SVD

How to Cite:

Shah, S. ., Muzammil, S. ., Khalid, G. ., Javed, R. ., Ahmed, D. ., Altaf, F. ., & Khalid, A. (2023). The Prevalence of Coccydynia among Postpartum Females in Allama Iqbal Memorial Teaching Hospital, Sialkot: Prevalence of Coccydynia among Postpartum Females. THE THERAPIST (Journal of Therapies & Rehabilitation Sciences), 4(1). <https://doi.org/10.54393/tt.v4i1.112>

*Corresponding Author:

Amna Khalid
Faculty of Medical Sciences, Government College
University Faisalabad, Faisalabad, Pakistan
amnakhaliid@gcuf.edu.pk

Received Date: 10th February, 2023

Acceptance Date: 23rd March, 2023

Published Date: 31st March, 2023

ABSTRACT

The coccydynia refers to the pain in the coccyx. Its incidence is increasing due to sedentary lifestyles. The problem is commonly seen in postpartum females caused due to prolong sitting, poor breast feeding position or due to internal and external trauma during labor. **Objective:** To evaluate the prevalence of coccydynia and its association with postpartum females in Allama Iqbal Memorial Teaching Hospital, Sialkot. This is an observational study and convenient sampling technique is used in it. **Methods:** This study includes 90 postpartum females of age between 20 to 44. Data were collected by using a questionnaire containing 16 questions. **Results:** Out of 90 postpartum females, the total number of patients having tailbone pain were 86.7% whereas, 8.2% participants had no pain after delivery. **Conclusion:** The study concludes that the prevalence rate of coccyx pain is very high in postpartum females, due to several reasons. The study mainly focus on providing guidance to the females about the correct positioning, exercises and postural guidance in order to maintain the active lifestyle.

INTRODUCTION

Coccydynia refers to pain in the region of the coccyx [1]. The coccyx is the last segment of spine which serves as an attachment for the muscles of pelvic floor and other muscles which plays a role in generating pain [2]. Low back pain is very common among females after child birth regardless of the delivery procedures [3]. Postpartum coccydynia is pain that appears as soon as a sitting position is adopted after delivery [4]. A lot of changes occur in women body during hormonal changes as growth changes the actual design of tendons and joints including coccyx [5]. There are some studies that explained about some risk factors that could cause pain i.e., age, smoking, BMI,

history of previous pelvic girdle pain (PGP) and psychological factors [6]. As after delivery hormones get back onto their normal levels so Bjelland claims that emotional distress is the only factor that could result in PGP after childbirth [7]. A recent research was conducted which showed a strong relationship between the coccyx pain, pelvic floor problems and pelvic pain [8]. The sacrococcygeal ligament are prone to damage during vaginal delivery and an acute trauma to coccyx may also occur through the birth canal [9]. A recent study was conducted in Faisalabad which showed that the tailbone pain has also a relationship with delivery procedure, during

the child birth [10]. Slight trauma can also happen if female sit on a hard, narrow, or unpleasant surface for an extended period of time [11]. A postpartum female needs to be cautious and need some specific instructions and considerations about her posture, position and comfort especially during breast feeding [12]. Modern furniture is not good for a correct position while breastfeeding while sitting which directly puts pressure on coccyx [13]. A study was conducted in 2019 which showed the association of breast feeding position with musculoskeletal pain in postpartum mothers of Rawalpindi and Islamabad [14]. Body mass index and women who delivered more than two times had usually more prevalence of tailbone pain [15]. A study conducted in 2019 in Sargodha also claimed that 62.2% women experience pain after first pregnancy and 37.8% women experience pain after second delivery or more [16]. The gold standard treatment for coccydynia is the procedures that do not involve any type of surgery. Stretching, manipulation, massages in coccygeal region and proper postural training is involved in the management of coccydynia [17]. If all management procedures failed, patient can go through coccygectomy [18].

METHODS

This cross-sectional study was conducted in Allama Iqbal Teaching Memorial Hospital, Sialkot, Punjab, Pakistan. It was completed over a period of 4 months. A sample size of 90 individuals was selected comprising of postpartum females suffering from coccydynia. Convenient sampling technique was used. Survey was done and questionnaires were given to collect sample. Postpartum females, females with no chronic illness with age group 20-44 years were included in the study. Pregnant women, females with history of spinal injury, rheumatoid arthritis, history of back pain and ankylosing spondylitis were excluded in our study. Patients received the questionnaire via forms and verbal instructions. Data were collected from vaccination center and gynecology ward. The questionnaire included questions such as age, weight, height, BMI, no. of pregnancies and delivery procedure. The statistical analysis was performed by using SPSS 21.0 [19]. Chi square tests were also performed to check either the variables we used have association with each other or not [20]. Epitool was used to calculate sample size by applying cochrane formula. Level of confidence was 95% ,whereas Level of precision was 0.05.

RESULTS

A total of 90 postpartum females completed the questionnaire. Among 90 females 26.7% were aged between 25-29 years. According to Table 1, Mean age of participants was 32.62. Minimum age was 20 and maximum

age of participants was 44. Standard deviation was 7.499.

Table 1: Participant's Age

Age	N	Minimum	Maximum	Mean ± SD
	90	20	44	32.62 ±7.499

Table 2 showed that, the results showed that among 90 patients, 65.6% patients agreed of having tailbone pain while 21.1% strongly agreed that they had tailbone pain. So, total number of patients having coccydynia is 86.7%. Out of 90 participants 5.6% participants were neutral and 7.8% participants disagree. The study revealed that prevalence of coccydynia is most frequent among housewives (76.7%) as compared to professionals (23.3%) like babysitters or teachers.

Table 2: Prevalence of Coccydynia

Do you feel pain in tail bone after delivery?	Frequency (%)	
	Disagree	7(7.8)
	Neutral	5(5.6)
	Agree	59(65.6)
	Strongly Agree	19(21.1)
Total	90(100)	

According to Table 3, 34.4% participants had delivered their baby through episiotomy, while 33.3% participants had undergone SVD and 32.2% participants had C-section. So, most of our participants had undergone episiotomy. Results showed that 96.5% participants had coccydynia after C-section while 93.5% participants had coccydynia after episiotomy and 70% participants had coccydynia after spontaneous vaginal delivery or SVD. Many other factors which can aggravate the pain were breastfeeding, prolonged sitting, baby care, sedentary lifestyle, bowel movements, climbing stairs and coughing.

Table 3: Delivery procedures and coccydynia

	Do you feel pain in tailbone after delivery ?					Total
	Disagree	Neutral	Agree	Strongly Agree		
Through which procedure you delivered your baby?						
Episiotomy	2	0	27	2	31	
SVD	5	4	13	8	30	
Cesarean	0	1	19	9	29	
Total	7	5	59	19	90	

p-value=0.003

DISCUSSION

After completion of this study we found that 78 out of 90 females agreed which means that 86.6% suffer from coccydynia in postpartum period. By this study we came to know about different factors that aggravates coccyx pain which includes breastfeeding, delivery procedure, prolonged sitting, coughing, sneezing and baby care. A research conducted in 2019 on coccydynia in women after

child birth discussed the factors of coccydynia after child births which were obesity, short perineum and difficulty in expulsion stage or instrumental vaginal delivery. This study discussed the factors but lacks in finding the prevalence of coccydynia after child birth [13]. But in our study, we find that 86.5% females suffered from coccydynia after childbirth. An observational study conducted on postpartum women from Maula Bakhsh DHQ Sargodha checked the causes and risk factors of coccydynia and it concludes that 55% of women have coccydynia after first pregnancy and 37.8% after second or more pregnancy [16]. But in our study, there is no association found between coccydynia and number of deliveries. A study was conducted in 2019 to check the association of breast feeding position with musculoskeletal pain in postpartum 54 mothers of Rawalpindi and Islamabad, this study stated that the musculoskeletal problem may occur because of bad posture during breast feeding [14]. In our study the prevalence of females having pain in coccyx during breastfeeding were 43%. In July 2012, a cohort study was conducted to investigate causes, clinical and imaging highlights and reaction to treatment of chronic coccydynia in adolescents. Number of 53 patients with chronic coccydynia were considered for 1-4 years. Trauma was the main cause of coccydynia in 20 cases. Obesity was not included in this research as risk factor [21]. In current study, BMI was calculated and 66.6% females were found over weight but no significant correlation was found between obesity and occurrence of coccydynia.

CONCLUSIONS

This study was conducted to check the prevalence of coccydynia among postpartum females in Allama Iqbal memorial teaching hospital Sialkot. The findings of the study provide a baseline of information about prevalence of coccydynia and its association with postpartum period. The results concluded that the prevalence rate of coccyx pain is 86.7% which is very high in postpartum females. Results showed that 96.5% participants had coccydynia after C-section while 93.5% participants had coccydynia after episiotomy and 70% participants had coccydynia after spontaneous vaginal delivery or SVD. Poor breast feeding position also playing role in aggravating coccyx pain (43.3%). Among 90 Participants, 54.4% females experienced more pain in coccyx while climbing stairs. Some other factors which can provoke coccyx pain were bowel movements, laughing, coughing, sneezing and baby care.

Authors Contribution

Conceptualization: SS, FA, AK

Methodology: RJ

Formal analysis: SM

Writing-review and editing: GK, DA, SS

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

Source of Funding

The authors received no financial support for the research, authorship and/or publication of this article.

REFERENCES

- [1] Maigne JY, Rusakiewicz F, Diouf M. Postpartum coccydynia: a case series study of 57 women. *European Journal of Physical and Rehabilitation Medicine*. 2012 Jul; 48(3): 387-92.
- [2] Foye PM. Coccydynia: Tailbone Pain. *Physical Medicine and Rehabilitation Clinics of North America*. 2017 Aug; 28(3): 539-49. doi: 10.1016/j.pmr.2017.03.006.
- [3] Asif A, Amjad F, Dastgir H, Asif W, Adil A, Afzal M. Prevalence of Neck and Low Back Pain in Women During Post-Partum Period: Neck and Back Pain During Post-Partum. *The Healer Journal of Physiotherapy and Rehabilitation Sciences*. 2022 Dec; 2(4): 271-8. doi: 10.55735/hjprs.v2i4.93.
- [4] Howard PD, Dolan AN, Falco AN, Holland BM, Wilkinson CF, Zink AM. A comparison of conservative interventions and their effectiveness for coccydynia: a systematic review. *Journal of Manual & Manipulative Therapy*. 2013 Nov; 21(4): 213-9. doi: 10.1179/2042618613Y.0000000040.
- [5] Sakamoto A and Gamada K. Altered musculoskeletal mechanics as risk factors for postpartum pelvic girdle pain: a literature review. *Journal of Physical Therapy Science*. 2019 Jul; 31(10): 831-8. doi: 10.1589/jpts.31.831.
- [6] Kovacs FM, Garcia E, Royuela A, González L, Abraira V, Spanish Back Pain Research Network. Prevalence and factors associated with low back pain and pelvic girdle pain during pregnancy: a multicenter study conducted in the Spanish National Health Service. *Spine*. 2012 Aug; 37(17): 1516-33. doi: 10.1097/BRS.0b013e31824dcb74.
- [7] Bjelland EK, Stuge B, Engdahl B, Eberhard-Gran M. The effect of emotional distress on persistent pelvic girdle pain after delivery: a longitudinal population study. *BJOG: An International Journal of Obstetrics & Gynaecology*. 2013 Jan; 120(1): 32-40. doi: 10.1111/1471-0528.12029.
- [8] Neville CE, Carrubba AR, Li Z, Ma Y, Chen AH. Association of coccygodynia with pelvic floor

- symptoms in women with pelvic pain. *PM&R*. 2022 Nov; 14(11): 1351-9. doi: 10.1002/pmrj.12706.
- [9] Kaushal R, Bhanot A, Luthra S, Gupta PN, Sharma RB. Intrapartum coccygeal fracture, a cause for postpartum coccydynia: a case report. *Journal of Surgical Orthopaedic Advances*. 2005 Jan; 14(3): 136-7.
- [10] Arif A, Sardar S, Gilani MF, Muneer R, Naz A, Manzoor N, et al. Prevalence of Coccydynia Among Postpartum Women. *Pakistan Journal of Health Sciences*. 2022 Dec; 3(7): 108-12. doi: 10.54393/pjhs.v3i07.418.
- [11] Maulana R, Wahyuniati N, Indra I. Postpartum Coccydynia: An Anatomy Overview. *Proceedings of The Annual International Conference, Syiah Kuala University-Life Sciences & Engineering Chapter*. 2015 Sep; 5(2): 279-81.
- [12] Vishnupriya S, Jagatheesan A, Dasarapu I. Coccydynia and Disability on Postpartum Vaginal Delivery Women. *INTI Journal*. 2022 Jan; 2022(07): 1-5.
- [13] Márquez-Carrasco ÁM, García-García E, Aragúndez-Marcos MP. Coccyx pain in women after childbirth. *Enfermería Clínica (English Edition)*. 2019 Jul; 29(4): 245-7. doi: 10.1016/j.enfcle.2019.01.005.
- [14] Rani S, Habiba U, Qazi W, Tassadaq N. Association of breastfeeding positioning with musculoskeletal pain in postpartum mothers of Rawalpindi and Islamabad. *Journal of Pakistan Medical Association*. 2019 Apr; 69: 564-6.
- [15] Kumagai Y, Biyajima M, Shimizu I, Ishii W. Coccyx subluxation: Coccyx pain aggravated by the prone position. *Journal of General and Family Medicine*. 2022 Nov; 23(6): 409-10. doi: 10.1002/jgf2.570.
- [16] Junaid Meer M, Muhammad Atif M, Afzal F, Aslam I, Khurshid A, Zulfiqar H, et al. Causes and Risk Factors of Coccydynia in Postpartum Women in DHQ Sargodha. *Journal of Pharmaceutical Research International*. 2022 Apr; 34(31B): 8-14. doi: 10.9734/jpri/2022/v34i31B36090.
- [17] Mahmood S, Ebraheim N, Stirton J, Varatharajan A. Coccydynia: A literature review of its anatomy, etiology, presentation, diagnosis, and treatment. *International Journal of Musculoskeletal Disorders*. 2018 Aug; 2: 1-5. doi: 10.29011/IJMD-109.000009.
- [18] Patel R, Appannagari A, Whang PG. Coccydynia. *Current Reviews in Musculoskeletal Medicine*. 2008 Dec; 1(3-4): 223-6. doi: 10.1007/s12178-008-9028-1.
- [19] Bala J. Contribution of SPSS in Social Sciences Research. *International Journal of Advanced Research in Computer Science*. 2016 Nov; 7(6): 250-4.
- [20] Rana R and Singhal R. Chi-square test and its application in hypothesis testing. *Journal of the Practice of Cardiovascular Sciences*. 2015 Jan; 1(1): 69. doi: 10.4103/2395-5414.157577.
- [21] Maigne JY, Pigeau I, Aguer N, Doursounian L, Chatellier G. Chronic coccydynia in adolescents. A series of 53 patients. *European Journal of Physical and Rehabilitation Medicine*. 2011 Jun; 47(2): 245-51.