Frequency of Sacroiliac Joint Pain Among the Health Care Professionals

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Highlights:

- Sarcoiliac joint pain among health care professionals was assessed
- Data collected from various hospitals of Lahore
- Prevalence and intensity of sacroiliac joint pain

Abstract:

Prolong standing is the cause that can affect the sacroiliac joint most. Lower back surgery, traumatic history, repetitive trauma, degenerative changes and inflammation are the causes of sacroiliac joint pain (SJP).

Objective:

To find out the frequency of sacroiliac joint pain among health care professionals.

Methodology:

A cross sectional study was conducted in Jinnah Hospital, General Hospital, Services Hospital and Ittefaq Hospital, Lahore, 883 health care professionals were included. 52.3% were males and 47.7% females, aged between 25 years to 70 years having mean age 35.96± (8.814SD)years. A self-generated questionnaire with Numeric Pain Rating Scale (NPRS) was used to find the prevalence and intensity of SJP among health care professionals.

Results:

The frequency of SJP was only 11.4% in health care professionals. The mean rate of intensity of pain was 5.31(±1.832 SD), the minimum pain intensity was 2 and maximum pain intensity was 10 by using NPRS. Prolonged standing (71.3%), prolonged sitting (62.4%), bending (62.4%) and weight lifting (55.4%) were the activities that affected the sacroiliac joint.

Conclusions:

It was observed that the SJP was not highly prevalent among health care professionals. According to NPRS, the intensity of pain was also mild and prolonged standing could affect the sacroiliac joint mostly, including other causes like trauma, inflammation, degenerative changes etc.

Key words:

Sacroiliac joint, health care professionals, low back pain, Numeric Pain Rating Scale.

Introduction:

The adult sacroiliac joint is a C-shaped and auricular. The surface area of sacroiliac joint in new born is 1.5cm^2, in adolescence it is 7cm^2, and in young it reaches to 17.5cm^2 (Gliding, tilting, rotation, and translation are different movements of sacroiliac joint that have been suggested[1,2]. Sacroiliac joint pain (SJP) is generally presented in the buttock area(94%). Referral of pain in the upper back area is (6%), lower back area (72%), groin (14%), or abdomen (2%). In 28% of patients, pain is presented in the leg and foot pain is reported in 12%.[3] The sacroiliac joint had no specific cause but pelvic shear force, repeated rotational force and inflammation are the possible causes that had been reported by previous literature. Some risk factors are responsible for causing SJP such as shortening of leg, lateral deviation deformity of spine, road traffic accidents, high physical work load, pregnancy, sacrum fixation by low back fusion surgery and abnormal gait pattern. Some other possible causes that were described in literature are fractures, tear of ligaments, tightness of myofascia, tumors, infection and arthritis.[4-9] Back injuries seem to be a major category of occupational injuries and high rate of injury and illness have been reported in health

care setting (nearly twice that of other service industries).[10] Certain occupational groups appear to be more at risk. Mitchell T *et al.*, reported 53% blamed their work for their LBP, 32% required a change of their work practice, 20% had taken time off work and 8% had required surgery[11]. Mirbod *et al.*,[12] also reported that problems with the shoulder, lower back and neck were the most frequently reported complaints in orthopedists and general surgeons.

Prevalence of SJP in general population in 2004 and reported that 15% LBP was due to sacroiliac joint problems. SJP occurred as an associated problem due to variations in primary problem without any history of falling, road traffic accidents etc, but 58% people presented with the history of trauma[13].A Study on SJP patients described that 44% of patients had a traumatic history while 21% had repetitive injury and others 35% had sudden onset of pain in sacroiliac joint, also reported that those patients who had no known cause but 50% of those had a history of lower back surgery[14]. The road traffic accidents, shortening of leg, pregnancy, older age, inflammatory joint disease and spinal surgery that had been performed in the past were predisposing factors[15, 16]. In the study the prevalence of SJP in chronic LBP patients is 30% and described that the groin pain was only differentiating referral area of sacroiliac joint rather than LBP[17].

This study was conducted to find outthe prevalence of SJP among health care professionals that is still unknown in Pakistan and rare in other countries too. So, the purpose of this study was to determine about how many people are suffering from SJPand hence, people will try to avoid the causes contributing to this pain that will improve the quality of life.

Methodology:

A Cross Sectional Study was conducted among 883 health care professionals, 462(52.3%) were males and 421(47.7%) were females, age limit was 25-70 years, the mean age was 35.96±8.814 years included both male and female participants from Jinnah Hospital, General Hospital, Services Hospital, Ittefaq Hospital Lahore. A self-generated questionnaire with NPRS was used to investigate the prevalence and intensity of SJP.

Results:

Healthcare professionals involved in the study were physicians (66.7%), physical therapists (10.07%), surgeons (3.17%), dentists (7.02), nurses (2.26%), radiologists (3.85%) and others (6.9%) etc (Figure 1). 101(11.4%) patients had SJP while 782(88.4%) had no SJP (Table 1).Table 2 shows that in prolonged sitting, 62.4% participants had SJP while 37.6% participants had no SJP, in prolonged standing 71.3% participants had SJP while 28.7% had not, in bending 62.4% participants had pain while 37.6% had not and in weight lifting 55.4% participants had pain while 44.6% had no SJP.

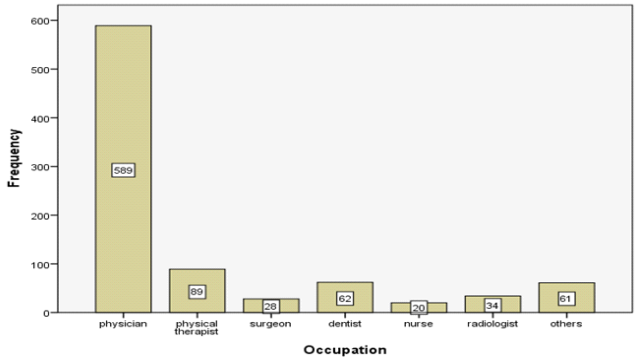

Figure 1: Occupation of Health care professionals

	Frequency	Percent
Yes	101	11.4
No	782	88.6
Total	883	100.0

Table 1: Frequency of sacroiliac joint pain in patients

Activities	Yes	No
Prolong sitting	62.4%	37.6%
Prolong standing	71.3%	28.7%
Bending	62.4%	37.6%
Weight lifting	55.4%	44.6%

Table 2 : Effect of pain on activities

Table 3 shows that out of 101 participants 39.6% had comfortable sitting and environment friendly while 60.4% didn't have comfortable sitting, 65.3% had altered their habits after experiancing pain while 34.7% had not, 92.1% had pain or discomfort.

	Yes	No
Does your work place involve comfortable sitting and practice environment	39.6%	60.4%
Did you alter your habits after experiencing sacroiliac joint pain	65.3%	34.7%
During working hours does pain or discomfort apprears	92.1%	7.9%
Does pain / discomfort caused you to take off from your work	47.5%	52.5%

Table 3: Effect of pain on habits and clinical work

Discussion:

There was no literature or work on the prevalence of SJP or even on prevalence of sacroiliac joint separately in the past. So in this study, the prevalence of sacroiliac joint was studied separately without association with LBP. Some positions likewise prolonged standing, prolonged sitting, bending and lifting weight affects the SJP but most commonly affected by prolonged standing. Uncomfortable sitting and lack of eco friendly environment during work also matters a lot.[12]

A previous study reported that SJP was not highly prevalent among the patients of chronic LBP and also reported the referral areas of SJP that were lower back ,groin, upper back, legs and lower part of abdomen. In some other studies, causative and predisposing factors were described like road traffic accidents, spinal surgeries and shortening of leg etc.,While this study did not find any causative and predisposing factors.[14,15]

Data from the present study suggest that the longer the years of practice, the greater the risk of suffering back pain. This was consistent with the findings of Chatterjee *et al.*,[18] reported that ophthalmologists with the longest-serving consultants having an increased incidence of LBP and the number and duration of acute attacks increased with years in specialty. In addition, On the other hand, Mirbod *et al.*,[12] reported that the junior orthopedists had significantly higher prevalence of stiffness in the lower back compared with the senior orthopedists. Chams *et al.*,[19] have also suggested that age and career time were inversely correlated with the developing LBP. However, this may also be training-related, as younger surgeons tended to have had less experience and less training in high risk activities.[20]

Overall, SJP affects the health care professionals to some extent and previous literature also supported this. Awareness regarding SJP, its prevention, possible causes and risk factors should be addressed in further studies.

Conclusions:

The prevalence of SJPamong health care professionals was low, intensity of pain according to NPRS was mild. It shows that the healthcare professionals are aware of their healh, wellbeing and postures.

Recommendation:

Similar studies should be done on other groups of populations to find the prevalances and awareness.

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