



## EXPLORING THE FACTORS BEHIND PATIENT REFUSAL OF INTRAARTICULAR CORTICOSTEROID INJECTIONS FOR ARTHRITIS

Dr Irfan Ud Din<sup>1</sup>, Dr Asma Rahim<sup>2\*</sup>

<sup>1</sup>Rheumatologist, District Headquarter Hospital Karak, Pakistan. Email: irfandr82@gmail.com

<sup>2\*</sup>Woman Medical Officer Type C Hospital Karak, Pakistan. Email: iqragul2012@gmail.com

**\*Corresponding author:** Dr Asma Rahim  
\*Email: iqragul2012@gmail.com

### ABSTRACT

**Introduction:** Intra-articular corticosteroid injections (IACIs) represent a well-established treatment method for arthritis patients because they deliver pain reduction together with functional improvement to the affected joints. Many patients decline IACIs because of different concerns that reduce their impact as an arthritis treatment.

**Objectives:** The goal of this research is to identify patient-based variables that lead to IACI rejection while assessing patient anxieties about adverse effects, together with their treatment selection preferences and procedure credibility.

**Materials and methods:** The research took place at District Headquarter Hospital, Karak, in the duration from 1st May 2023 to 31st October 2023. Two data collection methods were used to identify refusal reasons among 200 patients who denied receiving IACIs. Data were analyzed using SPSS.

**Results:** The personalized reasons for refusal of treatment included 14 per cent of patients who had a concern about the side effects of the medication, 25 per cent who had a lack of confidence in corticosteroid injection, 20 per cent who preferred other treatment options, and 15 per cent of patients who had negative previous experience on medication. Out of all the proposed treatments, patients preferred physiotherapy at 40%, second were analgesics preferred by 30% of patients, while 20% preferred topical treatment.

**Conclusion:** The acceptance of intra-articular corticosteroid injections for arthritis treatment improves when healthcare professionals dispel patient misinformation and enhance their communication efforts while delivering educational material.

**Keywords:** Intra-articular corticosteroid injections, arthritis, patient refusal, alternative treatments, medical misconceptions, pain management.

### INTRODUCTION

The wide-scale use of intra-articular corticosteroid injections (IACIs) serves as an established therapy for arthritis because they offer temporary pain management and improved joint functionalities. Many arthritis patients avoid receiving intra-articular corticosteroid injections, although their efficacy has been established because they have different concerns and misunderstandings about the procedure. Insights into patient refusal of treatments become essential for maximally improving arthritis care while decreasing treatment-related anxieties. Patients exhibit positive outcomes from IACIs, although different individuals avoid the treatment because of side effects, fears, and mistrust of the procedure,

along with cultural or societal beliefs (1). Medical intervention perceptions of patients lead to their choice decisions through personal encounters combined with social viewpoints and healthcare provider information. IACIs generate significant patient concern because they avoid the possibility of adverse consequences. Patient research documents their injection-related worries about pains alongside their concerns for joint destruction and the entire body effects of corticosteroid administration (2). Patients reasonably worry about the complications that develop because of multiple steroid injections because these treatments lead to cartilage deterioration along with an increased risk of infections (3). Medical research shows that IACIs yield effective treatment with proper care without causing long-term significant side effects (4). The incorrect assumptions about these medicines result in several patients choosing to forgo the potential advantages of these treatments, although the actual benefits exist.

Patient refusal is strongly impacted by the reality that intradiscal analgesic corticosteroid injections display variable levels of effectiveness when performed on various people (5). Some patients benefit from complete pain relief through IACIs, while others do not help at all from these treatments. Outcomes vary between patients, which causes doubt about the treatment. Several patients decide to pursue different medical procedures, such as physical therapy and platelet-rich plasma injections or surgery (6). The addition of ultrasound imaging to guide corticosteroid injections has proven beneficial for accuracy, yet patients continue to hesitate to use this treatment approach (7). Patients with joint infections or compromised immune systems receive advice against IACIs because of how these conditions affect their treatment perception (8). Society, together with culture, substantially influences how patients view IACIs. People in specific communities often choose traditional medical treatments above modern medical approaches, which delays the acceptance of corticosteroid injections (9). Religions and familial customs impact decision-making on healthcare treatments, as many people believe these injections unnatural or unneeded (10). Healthcare personnel should understand cultural values while giving proper information to patients because this approach reduces false beliefs and supports sound decision-making.

Healthcare workers are vital in ensuring patients how to use IACIs effectively. This is because when a doctor fails to explain his findings to the patient clearly, the patient who received the wrong information develops fear and refuses certain treatments (11). According to the previous study, there is a positive correlation between the patients who receive proper guidance and explanations offered by the medical staff regarding the use of IACIs and those who do not (12). In line with the previous research findings, patients with bad experiences with the health sector are more likely to develop medical treatment distrust of new treatments (13). The patient's resistance to injections results from their concern about developing a dependency on drugs in addition to daily injections. Patients have concerns that overdosing may lead to becoming addicted to the products, and they may not be as effective in the long run as they were initially (14). The study establishes that corticosteroid injections can safely return in the middle of the study, but they have long-term joint concerns and systemic effects (15). For the indication to be administered IACIs, the clinicians are supposed to balance the prompt management of symptoms from the impact on the joint status of the patient.

Arthritis patients' reasons include the side effects, variability, patient self-perceived culture, misinformation, or ill experiences from previous health interactions. Managing such concerns requires proper patient education, empirical and realistic reassurance, and ways to address these issues to adhere to arthritis treatment. Hesitant factors of patients help understand particular interferences healthcare providers use to create patient-support approaches for arthritis decisions.

**Objective:** The study shall explore barriers concerning intra-articular corticosteroid injections for arthritis treatment. These encompass side effects, fears and apprehensions regarding the effectiveness of the therapy, cultural beliefs regarding the treatment, and the acquisition of wrong information affecting the patient's treatment preferences.

## **MATERIALS AND METHODS**

**Study Design:** Cross Sectional Study.

**Study setting:** The research is conducted in District Headquarter Hospital Karak, Pakistan.

**Duration of the study:** The research spanned from 1st May 2023 to 31st October 2023.

#### **Inclusion Criteria:**

Individuals between 18 years old and older meeting the study requirements have osteoarthritis, rheumatoid arthritis, or other inflammatory joint disorders and received a recommendation for intra-articular corticosteroid injections. The research seeks to include persons who declined the injection once to evaluate their basis for refusal. A self-directed consent process followed by participant willingness to answer questions about their choice should be present for all subjects.

#### **Exclusion Criteria**

The research will exclude patients who have already received intra-articular corticosteroid injections and did not experience hesitation. Studies will also exclude patients with communication or psychiatric disorders and cognitive impairments that prevent them from giving informed consent to participate. Persons with medical issues that prevent corticosteroid injections or active joint infections will be excluded from this research since they might affect the main focus of patient-initiated rejection.

#### **Methods**

The study tackles patient rejection of intra-articular corticosteroid injections using quantitative surveys and qualitative interviews. Arthritis patients who refused the treatment will respond to a standardized questionnaire about their demographics, medical background, and their viewing reasons. The multicomponent questionnaire contains several multiple-choice and open-ended questions that enable researchers to obtain statistical data and personal insights. Semi-structured interviews will be used to study particular participants in depth regarding their medical treatment experiences and beliefs about treatment refusal. The research will use thematic analysis to discover shared patterns that motivate people to refuse medical treatments based on participants' free-form responses. Data will be collected in the rheumatology outpatient department of District Headquarter Hospital Karak, and written informed consent will be obtained before the data collection process. Descriptive and inferential analysis will be done in SPSS, which decomposes patient refusal percentages and develops pertinent factors recognized under the research.

## **RESULTS**

**Two hundred patients** who met all the ICD-10 coded diagnosis criteria for arthritis were recruited in the study. The participant's average age was **56.2 $\pm$  9.4**, and most were female (**n=120 or 60%**). The various reasons for refusal include **side effects (40%)**, **lack of confidence in the injection (25%)**, availability of **other treatments (20%)**, and bad experiences with injections (**15%**).

**Table 1: Demographic Characteristics of Patients**

Characteristic	Frequency (n=200)	Percentage (%)
<b>Age Group</b>		
18-40 years	45	22.5
41-60 years	90	45.0
>60 years	65	32.5
<b>Gender</b>		
Male	80	40.0
Female	120	60.0
<b>Education Level</b>		
No formal education	50	25.0
Primary education	65	32.5
Secondary education	55	27.5
Higher education	30	15.0

The patients refused such treatments mainly because of fear of side effects, as indicated by **40% of the respondents**. Of all the problems discussed, the most common side effects included joint **deterioration (50%)**, flare of joint pain **after injection (30%)**, and **risk of infection (20%)**. This lack of trust in the **procedure was seen to be 25%** and was attributed to a negative view of medical treatments as well as a lack of interaction between doctors and patients.

**Table 2: Reasons for Patient Refusal**

Reason for Refusal	Frequency (n=200)	Percentage (%)
Fear of side effects	80	40.0
Lack of trust in procedure	50	25.0
Preference for alternatives	40	20.0
Negative past experiences	30	15.0

Others included in the reasons for refusal of treatment; they further categorized as 30% using Analgesics, 40% using physiotherapy, 20% using Topical treatments. A total of 10% of the patients indicated that they were interested in surgical options.

**Table 3: Preferred Alternative Treatments**

Alternative Treatment	Frequency (n=200)	Percentage (%)
Analgesics	60	30.0
Physiotherapy	80	40.0
Topical treatments	40	20.0
Surgical options	20	10.0

There is a need to increase awareness regarding the disease and its treatment, as misperceptions and phobias contribute to treatment refusal. Better interaction between the health care provider and the patient should further elaborate on these issues and increase the acceptability of intra-articular corticosteroid injections.

## DISCUSSION

Therefore, this current study has brought out more factors that explain the reasons why patients refuse to take IACIs for arthritis besides the presence of addressing the concerns relating to fear, trust, preference for other treatment options, and previous medical experiences. Awareness of these factors is essential within the healthcare setting, where patients can be more easily managed to enhance their compliance with arthritis treatment. Among the most common rationales for refusal in this study were side effects cited by 40 percent of the patients. This fear is in concordance with other studies that portrayed corticosteroid injections as likely to cause joint deterioration, increased joint pain, and generalized side effects (1). In light of research that indicates that IACIs are safe and effective where they are appropriately used, perceptions of risk act as policy constraints when given to patients. Several participants also complained of diminishing cartilage density and a further increase in pain after the injection. In this regard, some research has linked this negative effect with repeated injection and high doses (3), which differs from a single injection conducted here. Furthermore, risk factors such as infection and corticosteroids' ability to be absorbed systematically have been other reasons why doubts have backed them despite proving rare in controlled medical environments.

The second reason for refusal was a lack of trust in the procedure, which ran at a quarter of the patient participants. This means that after assessing the clinical aspects of the injections, there is more to treatment acceptance than just the interactions between the medical practitioners and the patients. Previous research indicates that it is probable to discourage new treatments, especially invasive procedures, among those who have had negative perceptions concerning previous interventions in health (5). In this study, the patients in focus reported receiving ambiguous information on the gains and losses of IACIs from the treating physicians. Due to a lack of detailed information regarding the

potential outcomes, adverse effects, and after-injection measures, there was an erection of doubts and hesitation on the part of the client to go for the injection (6). It is suggested that informing and comforting the patients would make the rates of accepting IACIs higher among the patients (7). This could be helpful with attempts to improve patient education and ensure that patients' decisions are involved when it comes to some decisions that might be taken.

The main reason that patients gave for refusal of treatment was the absence of an incurable disease and the availability of other treatment options. Physiotherapy had the highest rating, as 40% of respondents were inclined to believe that exercises and rehabilitation would ensure the necessary relief rather than the potential adverse effects of corticosteroids. This is supported by literature that revealed highly structured PT interventions enhance joint mobility without much pain in arthritis patients (8). Moreover, 30% of the patients chose analgesics, 20% chose topical treatments, and only 10% of patients chose intra-articular corticosteroid injections, considering the latter as a final treatment step instead of the first-line therapy. This is mainly because there is increasing interest in biologic and regenerative medicine therapies that challenge corticosteroid use (9). Despite his criticism, it has not adequately proven to be effective in the long run, and costs are higher for topical treatments (10). This supports the opinion that cost factors are likely to play a role in patients' choices, especially in LMICs where accessibility of health services remains a significant concern.

Regarding the question, 11% of the patients mentioned they were afraid of injections because of their prior poor experiences, which emphasized the importance of earlier experiences in developing attitudes towards medication. This study showed that these clients had after-injection discomfort, insufficient pain relief, or other complications in previous IACIs, and they rejected future injections. Research has shown that patients who have not received substantial improvement after the first injection of Botox will not attend more sessions for more doses, even if it is medically advised (11). This notably means patient expectations should be managed or set correctly before administering corticosteroids. In as much as patients get temporary or partial relief from their ailments as recommended by the pillow, their disappointment may lead them to abandon the treatment option in the future (12).

However, cultural and social aspects have been identified as having a great influence on the refusal of treatment. Some people, especially in certain societies, prefer going for natural products than travelling to a hospital or consulting a doctor. This reasonably correlates with international studies, which have evidence that complementary treatment systems work on cultural values' tenets (13). Most of the clients from the rural setting and those with low education levels considered IACIs as 'unnatural or 'unneeded'. Furthermore, the culture and beliefs about medical treatments stand out as the other core category, focusing more on providing culturally appropriate educative materials for patients (14). Another reason was fear, which related to injections in particular; some patients expected to receive injections multiple times, and some believed that the use of injections would compromise the body's capacity to handle arthritis. Concerning the long-term detriment and compromised efficacy of the drugs, necessary moderate corticosteroids do not have a detrimental impact (15).

These results demonstrate the importance of developing a multifaceted strategy for implementing the patient education and decision-making process. Fear, misconceptions, previous negative experiences, and other factors have limited this vision. These are issues that need to be addressed by healthcare providers by giving straightforward information about the purpose and effects of corticosteroid injections, communication, and patient preferences. Allowing other treatment approaches while ensuring patients are given knowledge about the comparative effectiveness of the intervention treatments will assist in reducing the number of patients who turn down treatments. Prospective studies should also aim to find ways to enhance patient compliance with IACIs, undertaking inquiries, counseling, and comparative studies concerning patients' feedback on the outcomes of corticosteroid injections and other treatments. Moreover, cross-sectional surveys included in the studies can help identify long-term trends in patients' perceptions regarding IACIs to determine how they may change with time and what shifts in decision-making may occur due to certain factors. These issues can be overcome by patient-centered approaches, improvement of communication between patients and

doctors, and targeted medical education for chronic diseases like arthritis, which will help achieve better patient outcomes.

## CONCLUSION

This paper identifies the critical aspects that influence the decision of the patient regarding the rejection of IACIs for arthritis, including fear of the side effects that may be expected to arise from the injection, low patient confidence in the treatment, and the availability of other treatment methods that are preferred over IACIs, and past unfavorable experiences with the treatment. Even though IACIs have been proven to be effective in relieving pain, many patients have certain misconceptions regarding joint damage, risk of infection, and dependency. Other determinants include cultural beliefs and practiced culture about this disease by the patients, as well as the cultural barrier of physician-patient relationships. To enhance the acceptability of the recommendations, there is a need for the health providers to ensure that the patients comprehend the benefits over the risks involved and the use of counseling to handle any concerns that the patients may have and, in addition, provide options for the available treatment. Further research should focus on educational activities and approaches to raise the level of patients' knowledge and self-assurance when making decisions on IACIs. In particular, since there is always a gap between medical advice and patient knowledge, doctors and other personnel can enhance the chances of a patient's compliance with the medications and alleviate the consequences of arthritis, improving the patient's quality of life.

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