

To Study the Socio-Demographic Profile of Painful Knee

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Abstract

Background: MRI has revolutionized diagnostic imaging of the knee. It provides excellent soft tissue contrast and is capable of evaluating the soft tissue and bony structures in multiple imaging planes which provide significant advantages over other imaging techniques.

Methods: We performed prospective observational study of 100 patients who came with knee pain to MRI centre, Department of Radio Diagnosis, Jehangir Hospital, Pune for MR knee during the period of two years from 28 August 2015 to 27 August 2017.

Results- Most common age group affected was between 31 to 40 years (25 of 100 = 25%). Male patients predominated in study, there were 51 (51%) male and 49 (49%) female patients.

Conclusion: In our study, most of patients were young male.

Keywords: Age, Sex, Knee injury.

Introduction

Normal knee joint function is essential for day to day life and in many popular sports. The number of patients with complaints of painful knee joint is quite significant and therefore magnetic resonance imaging (MRI) of the

knee is of great value to understand and diagnose the varied pathologies causing painful knee. The information obtained from conventional radiographs of the knee is limited.¹

The knee is one of the most commonly injured joint. Knee injury is the second most common problem in the musculoskeletal system for which patients consult their physician. Clinical criteria have been developed and validated to decide the patients needing radiographic examination in acute situations. In acute situations, radiographs can be very useful to diagnose or rule out fractures. A second category of patients has subacute or even chronic symptoms that may be related to trauma, overuse, degeneration etc.²

Since its introduction to musculoskeletal imaging in the early 1980s, MRI has revolutionized diagnostic imaging of the knee. This innovative technology allows superior soft tissue detail with multiplanar imaging capability that provides accurate evaluation of the intra and peri-articular structures of the knee not demonstrated with other imaging modalities. The developments and advancements in MRI and the introduction of high resolution coils have provided a non-invasive, non-operator dependent, cost effective

means to diagnose knee pathology. MRI is well tolerated by patients, widely accepted by evaluating physicians and assists in distinguishing pathological knee conditions that may have similar clinical signs and symptoms.³

Material and Methods

Study Site: Department of Radio-diagnosis, Jehangir Hospital, Pune

Study Population: Magnetic resonance imaging of knee joint performed on patients referred to Dept. of Radio-diagnosis, Jehangir Hospital from OPD & indoor departments.

Study Design: Prospective observational study

Time Frame to address the study: 28 August 2015 to 27 August 2017

Inclusion criteria: All cases of knee pain where MRI was used as a modality in diagnosing the cause.

Exclusion criteria

- Contraindications to MRI study, such as patients with cardiac pacemaker, metallic implant, aneurysmal clips
- Claustrophobia or anxiety disorder exacerbated by MRI
- Inability to provide consent.
- Post-operative cases
- Patients who had no history of knee pain but underwent MRI of the knee

Methodology

Patients referred to the Dept. of Radio-diagnosis, Jehangir Hospital, for MR knee joint were matched with the inclusion criteria, those matching any of the exclusion criteria were excluded from the study.

A detailed clinical history was taken. This includes present complaints, past history and their sequence of occurrence in already diagnosed cases. Inspection of

the knee joint was done for swelling or any deformity of the knee joint. Previous MRI findings were noted and compared on follow up scan.

Imaging was done using dedicated extremity knee coils.

Statistical methods

All the data was recorded as per the decided study proforma. Descriptive statistics with univariate analysis was used to quantitatively describe or summarize features of collection of information from a given sample of 100 patients using tables, graphs, charts, proportions and percentages.

Results

The study group comprised of 100 patients (n=100) with knee pain. All patients gave informed consent. MRI knee was done.

Table 1: Age and sex wise distribution of patients.

Age (Years)	Male	Female	Total	Percentage (%)
11-20	3	1	4	4
21-30	12	8	20	20
31-40	13	12	25	25
41-50	11	7	18	18
51-60	10	13	23	23
61-70	2	7	9	9
71-80	0	1	1	1
Total	51 (51%)	49(49%)	100	100

Out of 100 patients, 51 were males and 49 were females. Male predominance noted. Sex ratio in our study was Male: Female = 1.04:1. The age of the patients in this study ranged from 18 years to 72 years. Most patients were in the age group of 31- 40 years (n=25) forming 25% followed by the age groups of 51- 60 (n=23) forming 23% of the study population. The

age and sex wise distribution of the patients in this study ranged from 18 years to 72 years. Most male patients were in the age group of 31- 40 years (n=13) and most female patients were in the age group of 51-60 years (n=13).



Figure 1: Bar diagram showing distribution of cases according to side.

Out of 100 patients, 57(57%) were right side knee and 43 (43%) were left side knee.

Discussion

This study included 100 patients who had history of knee pain and underwent MRI of the knee joint. Out of 100 patients, 51 were males and 49 were females. Male predominance noted. Sex ratio in our study was Male: Female = 1.04:1. The age of the patients in this study ranged from 18 years to 72 years. Most patients were in the age group of 31- 40 years (n=25) forming 25% of study population followed by the age groups of 51- 60 (n=23) forming 23% of the study population. Out of 100 patients, 57 were right side knee and 43 were left side knee.

Our results are in concordance with those of Yadav R et al., who described a mean age of 36.70 ± 14 years and a male preponderance in their study⁴. Male preponderance was also seen in study done by Gimhavanekar S et al., Mansour MAM et al., and Singh JP et al.,⁵⁻⁷

Conclusion

In our study, most of patients were young male.

References

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