

# Prevalence of Femoral Hernia in Bundelkhand Region of India.

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## ABSTRACT

**Background:** Present study is aimed to note the prevalence of femoral hernia and trend of disease in two genders and different age groups in patients from Bundelkhand region. **Methods:** This observational study was carried out on 42 patients of femoral hernia belonging from Bundelkhand region of India. Patients were classified into groups based on their genders, age, laterality and types of femoral hernia. All the findings were tabulated and inferences were drawn followed by statistical comparison using chi-square test with  $p$  value  $<0.05$  considered as significant. **Results:** Highest prevalence of femoral hernia was noted in  $>60$  years age group. Females show a higher preponderance for femoral hernia as compared to males. Prevalence of hernia was higher on right side as compared to left side. Recurrent femoral hernia showed very small preponderance. **Conclusion:** Such studies are needed to be conducted in all geographical regions with as much possible number of observations. Results of present study might be helpful for future studies in estimating femoral hernia prevalence in population as a whole.

**Keywords:** femoral, hernia, bundelkhand.

## INTRODUCTION

A hernia occurs when an organ pushes through an opening in the muscle or tissue that holds it in place. It is protrusions of body parts through defects in the anatomic structures that normally contains it and are most common in the abdomen. Abdominal wall hernias are frequently encountered in surgical practice accounting for 15% - 18% of all surgical procedures.<sup>[1,2]</sup>

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Femoral hernia is a ventral hernia commonly encountered by surgeons in clinical practice, although less common than inguinal hernia. Femoral hernia often needs an emergency operation because of incarceration or strangulation.<sup>[3]</sup> According to a British researcher, 50% of femoral hernias are admitted as emergencies with strangulation.<sup>[4]</sup> Femoral hernias account for about 1.2% to 10% of all groin hernias.<sup>[4,5]</sup>

The aim of present study is to note prevalence and pattern of femoral hernia in two genders and different age groups in patients from Bundelkhand region.

## MATERIALS AND METHODS

This observational study was carried out on patients of Bundelkhand region of India, suffering from femoral hernia presented in Department of surgery, Rajkiya Medical College, Jalaun, Uttar Pradesh; Siddhi Vinayak Hospital, Jalaun, Uttar Pradesh and Department of Surgery, District Hospital, Banda, Uttar Pradesh on 42 patients over a period of evaluation from December 2010 to December 2015. Patients belonging to other regions were not included in this study. A prior approval was taken for this study from research ethical society of the institute. A detailed history taking and thorough examination of all the patients were done. Data were stratified in groups formed on the basis of age and gender of patients, laterality of hernia and also on the basis of type of femoral hernia viz. primary/recurrent hernia; reducible/strangulated/strangulated with obstructed femoral hernia. All the findings were tabulated and inferences were drawn followed by statistical comparison with the help of "Statistical Calculator v 4.0" using suitable tests viz. chi-square test with  $p$  value  $<0.05$  considered as significant.

**RESULTS**

**Table 1: Age distribution of patients with femoral hernia.**

Age group in years	No. of patients
31-40	1
41-50	9
51-60	19
61-70	12
≥70	1
Total	42

**Table 2: Frequency distribution of femoral hernia between two genders.**

Gender	No. of patients
Male	4
Female	38
Total	42

**Table 3: Side distribution of femoral hernia.**

Side	Male	Female	Total number of patients
Right only	3	29	32
Left only	1	9	10
Bilateral	0	0	0

(Chi square test:  $X^2=0.312$   $df=1$   $p=0.57$ )

**Table 4: Distribution of patients on the basis of type of hernia.**

Type	Male	Female	Number of patients
Primary	3	37	40
Recurrent	1	1	2

(Chi square test:  $X^2=0.584$   $df=1$   $p=0.44$ )

Type	Male	Female	Number of patients
Reducible	1	6	7
Strangulated	2	31	33
Strangulated with intestinal obstruction	1	1	2

(Chi square test:  $X^2=4.45$   $df=2$   $p=0.1$ )

**DISCUSSION**

In the present study, highest prevalence of femoral hernia was found in 51-60 years age group [Table 1]. Elderly age group showing highest prevalence of femoral hernia were also notified by other workers from other parts of world<sup>[6,7]</sup>.

Females showed a higher preponderance than males for developing femoral hernia. [Table 2] Similar female preponderance was also noted by other workers.<sup>[6,8,9]</sup> The etiology of femoral hernia is still ill understood. In contrast to inguinal hernia, there is no proper embryological explanation. The wider femoral canal in females due to their wider pelvis and/or the smaller size of the femoral vessels may explain why females are more predisposed to femoral hernias than males.<sup>[10]</sup> The fact that femoral hernias are most frequently found in middle-aged

women suggests that intra-abdominal pressure and the stretching of aponeurotic tissue consequent on pregnancy are important factors that should not be ignored.<sup>[11]</sup> In females, the ring is relatively wider and changes during pregnancy, which helps to explain why femoral hernias account for about 20% of all groin hernias in women but less than 1% of groin hernias in men.<sup>[12]</sup> The ring also widens with advancing age. Variations in the attachment of the pectineal part of the lacunar ligament may also be a factor.<sup>[13]</sup>

Prevalence of hernia was higher on right side as compared to left side. No case was found to be bilateral [Table 3]. Right side dominance in femoral hernia was also noted by other worker from different geographical region<sup>6</sup>. Dominance of right side femoral hernia was seen in both gender. Majority of cases found in this study were primary often presented with strangulated hernia in emergency similar to other geographical region<sup>[14]</sup> [Table 4].

**CONCLUSION**

Results of present study might be helpful for future studies in estimating femoral hernia prevalence in population as a whole. Such studies are needed to be conducted in all geographical regions with as much possible number of observations.

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