

# Accidental ingestion of scarf/hijab pins in Muslim females of Kashmir Valley



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## ABSTRACT

**Background:** Hijab pin ingestion is common in the Kashmiri population, especially among young females. This is attributed to the tradition of wearing hijab in adolescent girls and young women. **Aims and Objectives:** The present study was conducted to identify the incidence of hijab pin ingestion in the Muslim females of Kashmir Valley. **Materials and Methods:** This study was conducted in the Department of General Surgery SKIMS Medical College, Bemina, Srinagar, from February 2022 to December 2023. It was a prospective study comprising 60 female patients above the age of 12 years having a history of accidental ingestion of hijab pins. History and clinical examination were followed by chest and abdominal radiographs. Data were collected and inferences were drawn. **Results:** The study included 60 patients presenting to the emergency with a history of accidental ingestion of pin. The majority of patients, that is, 30 (50%) were 25–35 years of age. Most patients 40 (67%) were asymptomatic at presentation with 20 (33.33%) patients presenting to the hospital within 2–3 h of ingestion. Foreign body (FB) had reached the small intestine in 22 (36.67%) patients at the time of presentation. Moreover, 1 (1.67%) patient had extraluminal migration of the FB. In our study, 46 patients had a normal passage of FB through the gastrointestinal tract. Most of the patients, that is, 46 (76.67%) were managed conservatively. Only 2 (6.67%) patients needed surgical intervention. **Conclusion:** FB ingestion is common among the young females of Kashmir Valley. Adequate follow-up is necessary to prevent long-term complications.

**Key words:** Pin; Foreign body; Ingestion; Hijab

## INTRODUCTION

Foreign body (FB) ingestion is commonly encountered during the pediatric age group.<sup>1</sup> In adults, FB ingestion can be accidental, if they are careless about the objects or if they have a cognitive impairment, poor vision, or are intoxicated.<sup>2,3</sup> People with psychiatric ailments are most likely to ingest FBs intentionally.<sup>4</sup> Most of the FBs pass spontaneously through the gastrointestinal tract (GIT). The physiologically and anatomically narrow parts of the GIT make the passage of the ingested body difficult and are the predilected sites for FB impaction.<sup>5,6</sup> Impaction is also seen in the context of pre-existing pathologies such as strictures, malignancy, esophageal rings, and achalasia.<sup>7</sup> Even though the mortality rate caused due to FBs is usually low, occasional deaths are reported across the globe. Approximately 1500

deaths per year have been attributed to FB ingestion in the United States.<sup>6</sup> The type of FBs may vary from community to community depending on the easy availability of objects that are intentionally or unintentionally put in the mouth. The most commonly seen upper GIT FB in the US in adults is meat bolus and bone chips, and in children, it includes coins, toys, magnets, and batteries.<sup>8</sup> In Africa and the Indian subcontinent, coins, meat boluses, and dentures are the most commonly expected FBs that could be ingested.<sup>9,10</sup> As long as no occlusion and/or other complications develop, the clinical signs are not necessarily dramatic and may even be lacking. Most patients present with the sensation of a FB, difficulty in swallowing, chest or abdominal pain, or vomiting.<sup>11</sup> The FB is passed naturally in some 80% of cases. In 20% of cases, intervention is indicated. Surgical intervention is indicated in <3% of cases.<sup>5-7,12-14</sup>

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In Kashmir Valley, the majority of the population is from the Muslim community. There is a unique pattern of FB ingestion in females. Muslim females in Kashmir Valley wear hijab/scarf religiously or on daily basis. In our community, the type of head cover/hijab used has markedly changed in the past few decades, initially, it used to be a simple piece of cloth that was tied at the back of the head and hangs over the back of the neck but not covering the face. However, young girls, especially school/college-going girls have switched over to an Iranian type of scarf-based head cover which needs multiple safety pins for fixation. During the wearing of a scarf, they tie it with multiple pins so that it does not slip away; whereas tying the hijab they will keep one or two pins under their teeth. Accidentally, these pins get swallowed during a sudden episode of sneezing, coughing, or deep inspiration or someone else pushing from behind or frighten you.

### Aims and objectives

The aim of our study was to see the incidence of Hijab pins ingestion in Muslim female population of Kashmir valley.

## MATERIALS AND METHODS

This study was conducted in the Department of General Surgery SKIMS Medical College, Bemina, Srinagar, from February 2022 to December 2023. It was a prospective study comprising 60 patients. All the female patients above the age of 12 years having a history of accidental ingestion of scarf pins recently or in the recent past were included in the study. History and clinical examination were followed by chest and abdominal radiographs. Computed tomography (CT) was done in those patients in whom FB was not located on X-ray film or those with non-progression of the FB or features suggestive of peritonitis. The patients with psychiatric ailments and underlying dysphagia and bulimia were excluded from the study. The data collected included age, symptomatology, location of FB as viewed on X-ray or CT, time for spontaneous passage, different complications, management approach, and duration of hospital stay. The data were compiled and analyzed using SPSS Version 20.0 (SPSS Inc. Chicago, Illinois, USA) and final inferences were drawn.

## RESULTS

In our study, there were 60 patients. Most of the patients presented to the emergency with a history of accidental ingestion of pin. The majority of patients, that is, 30 (50%) were 25–35 years of age, 12 (20%) patients were in the age group of 15–25 years followed by 9 (15%) patients in the age group of 35–45 years, 5 (8.33%) patients below

15 years of age, and 4 (6.67%) patients in the age group of 45–55 years (Table 1).

Out of 60 patients 40 (67%) patients had no symptoms at presentation, 8 (13%) patients had mild abdominal pain, 5 (8%) patients had constipation, 4 (7%) patients had vomiting, and 3 (5%) patients presented with diarrhea (Figure 1). Most of the patients, that is, 20 (33.33%) presented to the hospital within 2–3 h of ingestion, 15 (25%) patients presented within 24 h, 8 (13.33%) patients presented within 2–4 days, 6 (10%) patients within 5–7 days, followed by 7 (11.67%) patients within 1–2 weeks, 2 (3.33%) patients within 2–4 weeks, and 2 (3.33%) patients came after 1 month of ingestion of FB (Table 2).

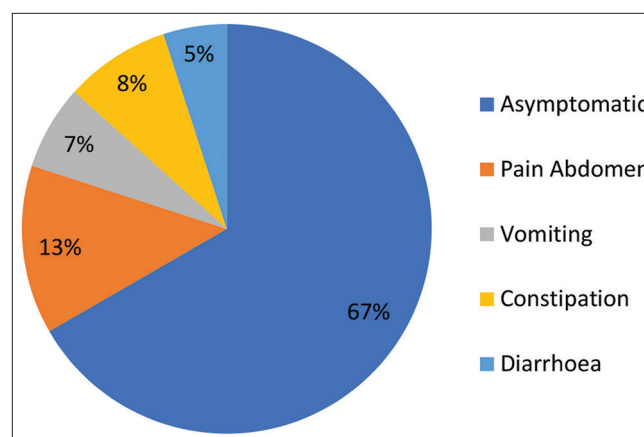
In the majority of patients, that is, 22 (36.67%) FB had reached the small intestine at the time of presentation. FB

**Table 1: Age distribution of patients with foreign-body ingestion**

Age (years)	No	% Age
<15	5	8.33
15–25	12	20
25–35	30	50
35–45	9	15
45–55	4	6.67
Total	60	100

**Table 2: Time of presentation to hospital from time of ingestion**

Time	No	% Age
2–3 h	20	33.33
24 h	15	25
2–4 days	8	13.33
5–7 days	6	10
1–2 weeks	7	11.67
2–4 weeks	2	3.33
1 month	2	3.33
Total	60	100



**Figure 1: Symptomatology of patients with foreign body ingestion**

was present in 14 (23.33%) patients in the large intestine followed by 8 (13.33%) patients who had a pin in the stomach, 3 (5%) patients who had a pin in the esophagus, and 1 (1.67%) patient had extraluminal migration of the FB (Table 3).

In 8 (13.33%) patients' FB was expelled through GIT within 24 h, 12 (20%) patients had expulsion within 24–48 h, 16 (26.67%) patients had within 48–72 h, and 10 (16.67%) patients had expulsion with 72–96 h (Figure 2). In our study, 46 patients had normal passage of FB through GIT, 1 (1.67%) patient had FB stuck to the small or large bowel, 1 (1.67%) patient had FB pierced into the wall of bowel, 1 (1.67%) patients had extraluminal migration of pin (Table 4).

11 (18.33%) patients had endoscopic retrieval of a pin. Most of the patients, that is, 46 (76.67%) were managed conservatively by advising a high fiber diet and followed with serial radiographs (Figure 3). Only

2 (6.67%) patients needed surgical intervention in view of the piercing of the bowel wall and impaling of the pin in the bowel wall. 1 (1%) patient was managed by colonoscopic retrieval (Figure 4). There was one patient with extra luminal migration with a pin located near the falciform ligament. Most of the asymptomatic patients (46) were discharged at the time of presentation to be followed by serial radiographs. Twelve patients had a duration of hospital stay of 1–2 days and two patients had a duration of hospital stay of 2–3 days (Figure 5).

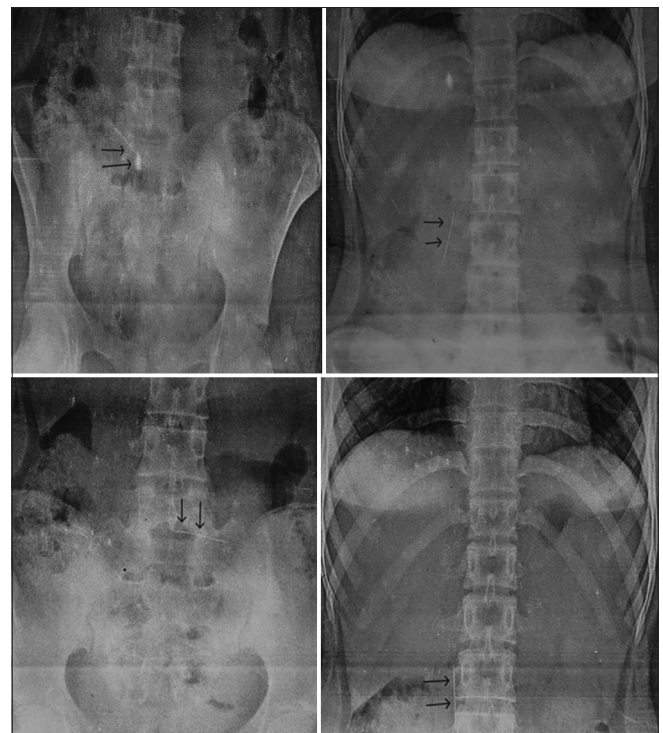
**Table 3: Location of a foreign body at the time of presentation as viewed on radiograph and CT**

Location	No	% Age
Oesophagus	3	5
Stomach	8	13.33
Small intestine	22	36.67
Large intestine	14	23.33
Extraluminal location	1	1.67
Foreign body expelled	12	20
Total	60	100

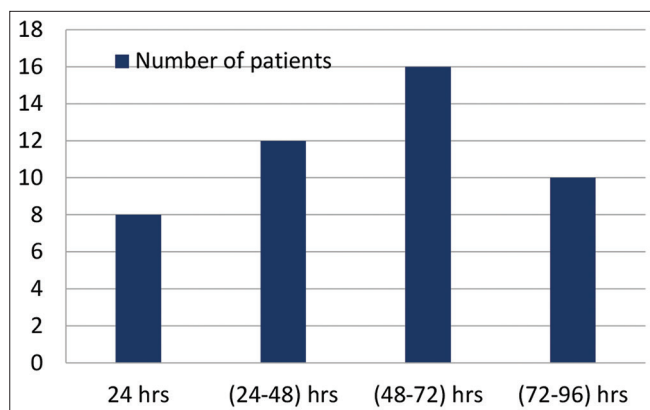
CT: Computed tomography

**Table 4: Complications seen in patients of foreign-body ingestion**

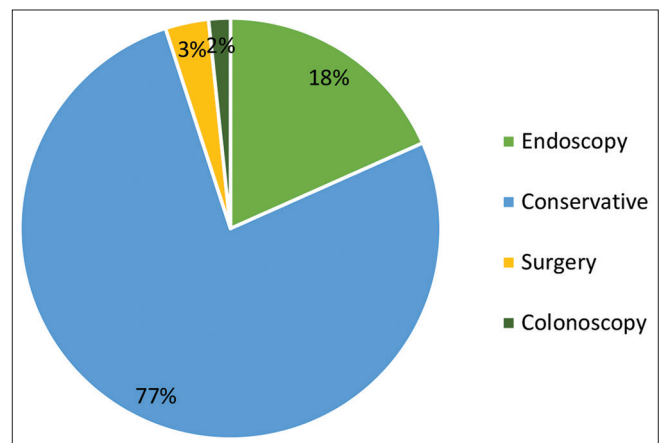
Complications	No	% Age
Piercing of bowel	1	1.67
Extraluminal migration	1	1.67
Stuck in bowel	1	1.67
Total	3	5



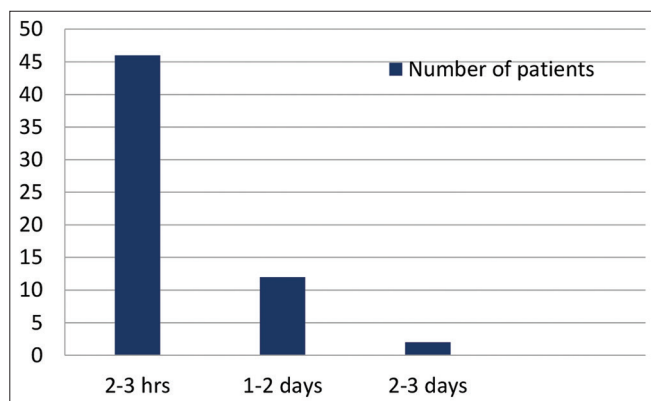
**Figure 3:** Serial X-rays of the abdomen taken at different times in a single patient to look for the progression of foreign body (double arrow showing the position of a pin)



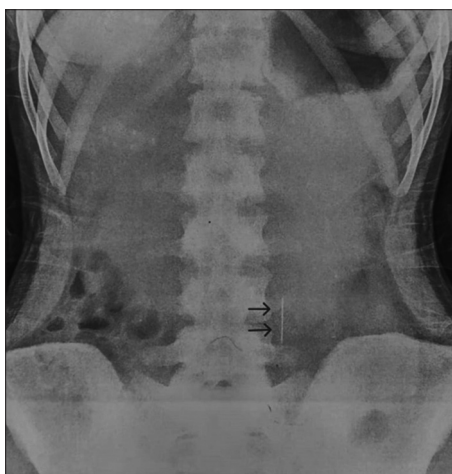
**Figure 2:** Time for spontaneous passage of a pin



**Figure 4:** Management approach for patients with foreign body ingestion



**Figure 5:** Duration of hospital stay



**Figure 6:** Another X-ray abdomen of the patient showing pin (double arrow)

## DISCUSSION

The type of FB ingested varies in different communities. Hijab pin ingestion is common in the Kashmiri population, especially among young females. Most of the females are in the age group of 20–30 years. This rise in FB ingestion is attributed to the tradition of wearing hijab in adolescent girls and young women, who sometimes hold these pins between their teeth or lips while they put on their headscarf. Most of the patients remain asymptomatic at presentation. Although the signs and symptoms of hijab pin ingestion are non-specific and vary from anxiety and throat pain to abdominal pain and true tenderness, they may be a valuable clue, focusing the clinician on the patients who may indeed require intervention and should not be overlooked. Outpatient follow-up seems to be a safe option for patients who are asymptomatic. Ingested pins may either pass unnoticeably or penetrate the mucosa, necessitating endoscopic or surgical removal and potentially causing damage to adjacent organs. According to current guidelines, sharp objects beyond the ligament of Treitz can be observed by serial radiographs (Figures 3 and 6), this should

be done in a hospital setting, and surgery is recommended if no passage is documented within 3 days.<sup>15</sup> In our study, 60% of cases presented with the pin already in the small bowel or colon. Most of these patients were discharged, only some patients had to undergo operative intervention in view of non-progression of FB or complications. In the majority of patients (36.67%) pin had reached the small bowel at the time of presentation. More than 70% of patients were managed by observation and follow-up X-rays. Although a CT scan should not be a routine part of the workup for ingested pins, an abdominal CT scan should be done in patients with a long-standing impaled pin to assess for infectious and mechanical complications or if the patient has signs of peritonitis. In our study, one patient was having extraluminal migration with a pin near the falciform ligament, yet this did not have any effect on her clinical status, two patients required surgery. A similar rate of surgical interventions for hijab pin ingestions was presented in a previous study.<sup>16,17</sup> Aydogdu et al.,<sup>18</sup> presented a cohort of foreign-body ingestion cases with an 18% incidence of hijab pins (32 pins). Their approach, as recommended by the guidelines, was that all sharp objects within reach of the endoscope should be removed if possible, and as such, all stomach pins were removed emergently. Despite the uneventful clinical course, hijab pins in the GIT carry a small but significant risk for serious complications. The most serious complications occurred in patients with no adequate follow-up who carried an impaled pin for several months. Alkan et al.,<sup>19</sup> presented a patient with right-sided hydronephrosis due to a hijab pin ingested 11 months earlier. Dalrymple et al. reported a patient with a perforation of the duodenum and liver with a localized pus collection, who presented with mild abdominal pain 2 months after pin ingestion.<sup>20</sup> These cases reveal the importance of ensuring adequate follow-up for asymptomatic patients discharged from the hospital without proof of passing the pin.

### Limitations of the study

The limitation of the study was that the study was conducted on small sample of patients and therefore a large sample studies are warranted.

## CONCLUSION

FB ingestion is common among the young females of Kashmir Valley. Adequate follow-up is necessary to look for the progression of FB through the GIT and to prevent long-term complications.

## ACKNOWLEDGMENT

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### Authors Contributions:

**MG** - Designed the study, prepared the draft of manuscript, performed review literature, statistical analysis and wrote discussion.

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