

Aspiration of hijab pin is sharply rising among young women---A preventable health problem

Anil Kakunje¹, Rahyanath Pookoth², Asma N. Ahmed³, Sowmya Puthran⁴,
Anjali Nambiar⁵

¹Department of Psychiatry, ⁵Respiratory Therapist, Yenepoya Medical College, Yenepoya University, Mangalore, Karnataka, India, ²Yenepoya Research Centre, Yenepoya University, Mangalore, Karnataka, India, ³Clinical Counselor, Toronto, Canada, ⁴Kakunje Psychiatry and Counselling Centre, Mangalore, Karnataka, India

ABSTRACT

Introduction: Foreign body aspiration is a common life threatening emergency but largely a preventable problem. There is an increase in the number of headscarf pin aspiration cases among young girls as a result of increase in the number of veiling population. With the number of hijab wearing population increasing all over the world, attention must be brought to the risk associated with holding the hijab pins in the mouth. **Aim:** To study the practice of holding hijab pin in the mouth among Muslim women. **Methods:** In a first study of its kind, we interviewed 270 Muslim women with varied background to study the practice of hijab pin use and holding it in the mouth. **Results:** Among 270 Muslim women, 260 (96.3%) of them wear hijab. 221 (81.85%) women use hijab pins to hold different layers of hijab. 191 (70.74%) of them hold the hijab pins in between the lips when they adjust the layers of hijab. 72 (26.67%) women had occasions when the hijab pin slipped into their mouth and 10 (3.70%) of them have aspirated the hijab pin accidentally. Maximum hijab pin use is in the age group between 21 and 40 years (89.44%) and least in the elderly (6.66%). Occasions when the pin slipped into the mouth or aspirations both are maximum in the below 20 years group. Both are nil in elderly. **Conclusion:** Appropriate education and intervention need to be planned as more young population are getting involved. Most importantly refrain from holding the pin in the mouth!

Keywords: Aspiration, headscarf, hijab pin, Muslim, preventable, turban

Introduction

Foreign body aspiration is a common life threatening emergency but largely a preventable problem. It refers to the inhalation of an object into respiratory system and is a serious potentially fatal event.^[1] The object aspirated depends on various factors like, age, sex, occupation, geographical area, sociocultural factors, economic status, and nutritional habits. For the current generation, traditional/social habits and fashion trends of using hijab pins have become a discrete category of foreign body

aspiration among girls. This is seen more in young Muslim girls wearing headscarves.^[2] There is an increase in the number of turban pin aspiration cases in young girls as a result of increase in the number of veiling population. A hijab is a kind of head cover, worn for religious intentions.^[3] Headscarf pin aspiration is common in Muslim girls, who inappropriately place the pins between their lips while securing scarf on head.^[4] In Islamic life style girls start to wear a turban with the onset of puberty. Foreign bodies in the aerodigestive tract are important causes of morbidity and mortality and postdiagnostic and therapeutic challenges.^[5] Recently, there has been an increase in trends of aspiration and ingestion of sharp foreign body (pins) due to headscarf particularly in Muslim girls who have the habit of holding the pin between their lips or teeth, to get a free hand while

Address for correspondence: Dr. Anil Kakunje,
Department of Psychiatry, Yenepoya Medical College, Yenepoya
University, Mangalore, Karnataka, India.
E-mail: anilpsychiatry@yahoo.co.in

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doing or undoing their headscarf. The beaded end of the pins is heavier than the rest of the pin and therefore the pin usually falls with beaded end pointing downwards.^[6] The process of wearing a headscarf is a complex task. Turban pins (headscarf needles) are used for attaching the layers of turban to each other in order to keep it steady around the head. Young adolescent Muslim girls and adults tend to hold the headscarf pin between their lips while wearing the headscarves using their two hands to secure the veil. Any maneuver, such as laughter, talking, sneezing, and coughing predisposes them to aspiration, especially in young teenage groups where they lack experience in such maneuvers. The headscarf pin is about 4 cm in length with a smooth rounded pearl like head which comes in various colors to match the dress one is wearing.^[1] The use of headscarf pins is a fashion trend. Girls sometimes use more than one pin hence it is a habitual behavior to hold the other pins between the teeth while they pin and adjust the headscarf/hijab. With the number of hijab wearing population increasing all over the world, attention must be brought to the risk associated with the use of hairpins.^[3] The older generation used to tie the headscarf using knots and they hardly used pins.^[7] The fashion trend is leading to a health risk which can be easily preventable. Primary care physicians get involved in social, environmental, and community determinants of health. Social determinants of health are defined as “the conditions in which people are born, grow, work, live, age, and the wider set of forces and systems shaping the conditions of daily life.”^[8] Primary care physician’s role in public health is not just limited to being a clinician but also as someone who influences health practices, education of public, and as community leader. They are generally point of first contact for any health related issues.^[9] The extent of hijab pin aspirations in the community needs to be studied. To our knowledge, this is the first study done with this objective.

Aim

To study the practice of holding hijab pin in the mouth among Muslim women.

Methods

It was a cross-sectional study with random convenient sampling conducted at X. Assuming 50% of Muslim women use hijab pin, 6% precision level, 95% confidence, sample size was calculated as 270.

Two-hundred seventy Muslim women were interviewed for the study. None refused consent. Participants were students selected randomly from the registers and relatives of the patients visiting the hospital. A questionnaire validated by five experts in the field was provided to record their age, hijab use, use of pins to fix the hijab, and practice of holding the hijab pin in the mouth. The duration of the study was for 3 months from April to June 2018.

Inclusion criteria were Muslim women above the age of 18 years. Exclusion criteria were inability to complete the questionnaire due to any reason (visual impairment, hearing impairment, speech impairment, etc.) and sub-normal intelligence clinically.

Written informed consent was taken from all participants and the study was cleared by the Institutional ethics committee. Strict confidentiality is maintained regarding the obtained information. No comments/opinions were passed on participant’s religious practices or beliefs. Study was only to understand the prevailing practices in this region.

Results

The study included 270 women from Muslim religion ranging in age from 18 to 80 years (mean age 49.5). Their educational background, location details, and marital status are shown in Table 1.

Among these 270 Muslim women, 260 (96.3%) of them wear hijab. 221 (81.85%) Muslim women use hijab pin to hold different layers of hijab. 191 (70.74%) of them hold the hijab pin in between the lips when they adjust the layers of hijab. 72 (26.67%) women had occasions when the hijab pin slipped to their mouth and 10 (3.70%) of them have aspirated the hijab pin accidentally. Number of women who used one hijab pin was 90 (30.33%), two hijab pins were 79 (29.25%), three hijab pins were 39 (14.44%), four hijab pins were 12 (4.44%), and more than four pins 1 (0.37%). Details are shown in Table 2.

Table 3 shows hijab pin use practices, number of pins used, occasions of slipping into the mouth, and aspiration incidents at various age groups. These parameters are analyzed for different age groups such as below 20, between 21 and 40, between 41 and 60, and between 61 and 80.

Discussion

In recent times, young and adolescent Muslim girls use multiple matching small headscarf pins to fix the hijab as a fashion trend.^[2] Adolescent girls and young adults tend to hold the headscarf pin between their lips while wearing the headscarves using their

Table 1: Education, location, and marital details of the study participants

	Numbers n=270
Education	
Illiterate	9 (3.33%)
School level	82 (30.37%)
Matriculation	51 (20.40%)
Graduate	93 (34.44%)
Post graduate	35 (12.96%)
Locality	
Rural	18 (6.67%)
Semi-urban	140 (51.85%)
Urban	112 (41.48%)
Marital status	
Single	41 (15.18%)
Married	221 (81.86%)
Divorced	7 (2.59%)
Separated	1 (0.37%)

two hands to secure the veil.^[2] Similar cases are also encountered when Indian ladies keep safety pins in the mouth while wearing a sari. Lack of concentration or activities such as laughter, talking, and coughing predisposes them to aspiration especially in young teenage groups where they lack experience in such maneuvers.^[2]

In our study, 96% of the participants reported wearing hijab and 81% of them routinely use hijab pins to secure the scarf which is a significant number. About one-third of the participants used only one pin. 20% of the subjects used three or more pins to secure the veil. 70% of the sampled population held the pins in the mouth and one-fourth of them had experiences of the pin slipping into their mouth. 3.7% had incidents of aspiration of the pin at some point in their lifetime!

Analyzing the results after dividing the sample into various age groups, we notice that hijab use is common in all age groups with a slight decrease in the elderly. Hijab pin use is also common except in the elderly. When we enquired about the number of pins used, one pin was used maximum in the 41--60 years group (57.57%). Two pins were used maximum in the 21--40 years group (39.75%). Three pins were used highest by the youngest lot (32%). Four pins were used more by 21--40 years group (6.83%). More than four pins regularly were used only in less than 20 years group probably indicating the fashion phenomenon. Women holding the pins in between their lips are seen majorly in the 21--40 years group and

less than 20 years group. Occasions of pin slipping into the mouth is inversely related to the age. It is 39.28% (<20 years), 32.29% (21--40 years), 13.63% (41--60 years), and 0% (>60 years) group. Incidents of aspirations are also decreasing with age; maximum instances happening in the youngest group with 7.14%, followed by 4.96% in the 21--40 years group. It is nil age groups above 40 years. This data is in line with the existing literature and common knowledge that inexperience and lack of training could be the reason for higher incidents in the adolescents and young adults.

Twenty-six young patients, all veiled, were hospitalized in the service of Respiratory Diseases University Hospital Ibn Rushd of Casablanca between January 2005 and July 2011 for inhaled scarf pin; their mean age was 16 years.^[10] Thirty-six (6.8%) of all the foreign body aspirations over a period of 6 years at the Children's Hospital in Rabat, Morocco, were due to pin inhalations. All were females between 10 and 15 years.^[11] A study from Turkey reviewed 105 patients admitted to their hospital with turban pin aspiration. They opined it is more among Islamic women population and is commonly referred in the literature as "turban pin syndrome"^[12] or as hijab syndrome.^[1]

Thirty-six cases of turban pin aspiration were reported from Srinagar, India (34 females and 2 males) with mean age of 14.2 years (range 6--32 years) over a period of 2 years.^[13]

Majority of the literature available on this topic is from the surgical/interventional specialists who handle pin aspiration problems after the incident.^[1,10-12,14-16] Compared with other foreign body aspirations this can easily be prevented.

Aerodigestive foreign bodies are not so rare in the hospital and timely diagnosis and removal of accidentally ingested and aspirated the foreign body should be performed so as to avoid the potentially lethal complications associated.^[5] Bronchoscopy is the treatment modality of choice and surgery is rarely required.^[4] Pearl head pins behave as floating objects, mobile in nature especially in the early phase of inhalation and initial immediate preoperative X-rays are beneficial. The removal can encounter certain difficulties and the surgeon needs to be vigilant and skillful.^[13] Rigid esophagoscopy requires general anesthesia and

Table 2: Details of the practice of hijab use, use of pins, and aspiration incidents

Parameters	Number n=270
Number of women who wear hijab	260 (96.3%)
Number of women who use hijab pins	221 (81.85%)
Number of women who used one hijab pin	90 (33.33%)
Number of women who used two hijab pins	79 (29.25%)
Number of women who used three hijab pins	39 (14.44%)
Number of women who used four hijab pins	12 (4.44%)
No of women who used more than four hijab pins	1 (0.37%)
No of women who held pins in between the lips	191 (70.74%)
No of women who had occasions when the pin slipped to their mouth	72 (26.67%)
No of women who aspirated hijab pin	10 (3.70%)

Table 3: Hijab use practices, use of pins, and aspirations in different age groups

Parameters n=270	Age Below 20 n=28	Age 21--40 n=161	Age 41--60 n=66	Age 61--80 n=15
No of women who wear hijab	27 (96.42%)	160 (99.37%)	62 (93.93%)	11 (73.33%)
No of women who use hijab pins	23 (82.14%)	144 (89.44%)	53 (80.30%)	1 (6.66%)
No of women who used one hijab pin	4 (14.28%)	47 (29.19%)	38 (57.57%)	1 (6.66%)
No of women who used two hijab pins	8 (28.57%)	64 (39.75%)	7 (10.60%)	0 (0.0%)
No of women who used three hijab pins	9 (32.14%)	29 (18.01%)	1 (1.51%)	0 (0.0%)
No of women who used four hijab pins	1 (3.57%)	11 (6.83%)	0 (0.0%)	0 (0.0%)
No of women who used more >4 hijab pins	1 (3.57%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
No of women held pins in between their lips	20 (71.42%)	136 (84.47%)	34 (51.51%)	1 (6.66%)
No of women who had occasions when the pin slipped into their mouth	11 (39.28%)	52 (32.29%)	9 (13.63%)	0 (0.0%)
No of women who aspirated hijab pin	2 (7.14%)	8 (4.96%)	0 (0.0%)	0 (0.0%)

is associated with its own complications, but experience and outcome of its use are generally encouraging.^[5]

With the number of turban wearing girls and women all over the world increasing, attention must be brought to the risk associated holding hairpins in the mouth.^[3] Clinicians should be aware of this distinct form of foreign body aspiration, its method of diagnosis, and extraction technique.^[17] A cultural investigation showed a difference in the turban fastening technique of young girls as compared with their mothers.

To the authors' knowledge, this is the first study looking at the use of hijab pin practices, incidents of aspiration in the community population. This study will be good base for further research in this area. Preventive strategies need to be planned. The strengths of the study are that it had a good sample size, none of the participants refused consent, varied age groups from different educational, economic, and regional background. The questionnaire was simple and validated by experts in the field.

Limitations are its cross-sectional assessment, someone giving wrong information for the fear of criticism and recall bias. However, we feel chances of forgetting pin slipping into the mouth or aspiration incidents could be negligible.

Accidental foreign body aspiration to a large extent is a preventable problem and more so in the case of the headscarf pin. Appropriate intervention need to be planned as more young population is getting involved.^[2] High number of accidental ingestion of metallic hairpins in young Muslim females highlights the need for a health education program in this population.^[6] Few suggestions are to ensure public health awareness in schools and public media, specially targeting the risk population, mothers to monitor and educate their children, use of knots, clips, snappers, and adhesive tapes to fix the scarf.

Conclusion

Accidental foreign body aspiration of hijab pins is a preventable problem. Appropriate education and intervention needs to be planned as more young population is getting involved in a fashion oriented society. Most importantly refrain from holding pin in the mouth!

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Conflicts of interest

There are no conflicts of interest.

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