

Awareness of Risk Factors of Hernia among Adults in Al-jouf region, Saudi Arabia

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ABSTRACT

Background: A hernia is characterized as the distension of an organ or tissue through an abdominal muscle ordinary opening, it happens when an organ or greasy tissue presses through a feeble spot in an encompassing muscle or connective tissue called fascia ⁽¹⁾.

Objective: This study aimed at assessing the awareness of the risk factors of abdominal hernias among adults in Al-jouf, Saudi Arabia.

Material and Methods: This is a cross-sectional community-based study of a qualitative approach. The present study enrolled 105 candidates (aged 18 to 45), males 63, 42 Female. Moreover, candidates were subjected to structured self-administered close-ended study questionnaire during the period between January and February 2018 and one month for data analysis

Results: The present study enrolled 105 candidates, from both gender male (63, %60) and female (42, %40). Age groups were (18-25) %62, (26-35) %35, (36-45) %3 Ages were varied according to the level of education (high school, college, graduated). Evaluation of the knowledge about Hernia: the highest proportion goes to %38 for Very Good then, %36 for Good, and the less %26 for Excellent.

Recommendation and Conclusion: The present study revealed that the study group of Saudis, both gender have knowledge on the risk factors for hernia regardless to the age, gender and level of education. In the face of, 59% related Hernia with asthma, 81% constipation, 40% smoking, 41% enlarged prostate, 88.5% pregnancy, 89.5% heavy lifting, and 86% surgery. Unlike, participants have no knowledge about relating DM to hernia with proportion of 44%, This indicates that further studies are needed to clarify these conclusions. We recommend establishment of an awareness campaign for hernia risk factors among Saudi adults such as social media.

Keywords: Adults, hernia, inguinal, risk factors, KSA.

INTRODUCTION

A hernia is characterized as the distension of an organ or tissue through an abdominal muscle ordinary opening, it happens when an organ or greasy tissue presses through a feeble spot in an encompassing muscle or connective tissue called fascia ⁽¹⁾. One of the abdominal wall hernia's forms called inguinal hernia, a well-known surgical pathology ⁽²⁾. Furthermore, the risk of inguinal hernia renovation is assessed to be 27% for men and 3% for women ⁽³⁾.

Additional risk factors occur for the progress of inguinal hernias informed to be related with improved risk for sexes and smoking, which leads to a heavy lifting, defective connective tissue metabolism and chronic obstructive pulmonary illness ⁽⁴⁾. Moreover, it was stated that factors such as peritoneal dialysis, lower body-mass index, collagen vascular disease, thoracic or abdominal aortic aneurysm, high intra-abdominal pressure, patent processes vaginalis, and history of open appendectomy, are considered to be risk factors for inguinal hernia ⁽⁵⁾.

In 2001-2 around 70,000 inguinal hernia repairs (62 969 essential, 4939 intermittent) were done in England, requiring in excess of 100,000 doctor's facility bed days. 95 for every penny of patients pre-senting to essential care are male, and in

men the frequency ascends from 11 for each 10,000-person years matured 16 - 24 years to 200 for each 10,000; aged 75 years or above ⁽⁶⁾.

To illustrate, other study demonstrated that budgetary imperatives and absence of awareness were accounted for as the most widely recognized reasons behind late appearance of hernia. Certainty, human beings living with inguinal hernia have suffered different sorts of disgrace and differentiation, it was uncovered that individuals living with a state of huge hydrocele and inguinal hernia either experienced issues to marry or stay unmarried forever ⁽⁷⁾.

Accordingly, casualties of inguinal hernia and hydrocele are viewed as fruitless and useless. Supplementary, this makes individuals living with inguinal hernia to veil their positive status until the point when they ended up gangrenous and immense bringing about crisis medicines or passing ⁽⁷⁾.

OBJECTIVE

This study aimed at assessing the awareness of the risk factors of abdominal hernias among adults in Al-jouf, Saudi Arabia.

MATERIALS AND METHODS

This is a cross-sectional community-based study of a qualitative approach. The present study enrolled 105 candidates (aged 18 to 45), males 63,

42 Female. Moreover, candidates were subjected to structured self-administered close-ended study questionnaire during the period between January and February 2018 in addition to one month for data analysis.

Study questionnaire was divided into two sections, the first section was performed with information of the candidates, whereas the second section was performed to evaluate the personal knowledge about Hernia. Items analysis were done using percentage of responses and calculation of frequencies.

Statistical data analysis procedure: Results analyzed by PPSP version 23.

Table 1: Socio-demographic characteristics of the studied population.

	Value	Frequency	Percent	Valid Percent	Cum Percent
Age	18-25	65	62	62	100
	26-35	37	35	35	38
	36-45	3	3	3	3
	Total	105	100	100	
Gender	Female	42	40	40	40
	Male	63	60	60	100
Level of education	Graduate	68	65	65	97
	College	34	32	32	32
	High school	3	3	3	100

Table 2 shows the assessment of the candidates' knowledge of Hernia as the following:

Evaluation of the knowledge about Hernia: the highest proportion goes to %38 for Very Good then, %36 for Good, and the less %26 for Excellent.

Association between asthma and the development of Hernia. The highest rate of the candidates was approving with %59 whilst %26 demanded on having no idea by answering with (I do not know), %15 answered (No).

Correlation between Hernia and heavy lifting: the upper most rate indicates the approving with %89.5 then %9.5 says I do not know and only %1 answered No.

The question indicates the correlation between constipation and Hernia to be 81% for (Yes) which is the highest proportion, 10% for (No), 9% of the candidates claimed to have no knowledge.

RESULTS

The present study enrolled 105 candidates, from both gender male (63, %60) and female (42, %40). Age groups were (18-25) %62, (26-35) %35, (36-45) %3. Ages were varied according to the level of education (high school, college, graduated). Table1 illustrates all the information collected of the socio-demographic characteristics of the candidates.

Association between smoking and Hernia revealed 40% for Yes, 26 %for having no knowledge and 34% for No respectively.

Correlation between enlarged prostate and Hernia: 40%, 19%, 41% for “I do not know”, “No” and “Yes” respectively.

Question investigated the association of hernia with pregnancy: 88.5%, 2% and 9.5% for “yes”, “No” and “I don’t know” options respectively. Besides, connotation between hernia and surgery had a similar outcome with proportions of 86, 8 and 7% for “yes”, “No” and “I don’t know” answers respectively.

The last question assessed the candidates' knowledge about the connotation between Diabetes Mellitus effect on the development of Hernia. To illustrate, partially of the candidates answered with 44% hasn't no idea. On the other hand, 30% claimed with “Yes”, whilst 26% answered with “No”.

Table 2: Outcome of the assessment of the participants' knowledge of Hernia.

	Value	Frequency	Percent	Valid Percent	Cum Percent
How will you evaluate your knowledge about Hernia?	Excellent	27	26	26	26
	Good	38	36	36	62
	Very Good	40	38	38	100
	Total	105	100	100	
Do you think asthmatic patient has high chance to develop hernia?	I do not know	27	26	26	26
	No	16	15	15	41
	Yes	62	59	59	100
	Total	105	100	100	
Do you think hernia is related to heavy lifting?	I do not know	10	9.52	9.52	9.52
	No	1	.95	.95	10.48
	Yes	94	89.52	89.52	100
	Total	105	100	100	
Do you think hernia is related to constipation?	I do not know	9	9	9	8.57
	No	11	10	10	19
	Yes	85	81	81	100
	Total	105	100	100	
Do you think hernia is related to smoking?	I do not know	27	26	26	26
	No	36	34	34	60
	Yes	42	40	40	100
	Total	105	100	100	
Do you think patients with enlarged prostate have a high possibility to suffer from hernia?	I do not know	2	40	40	40
	No	20	19	19	59
	Yes	43	41	41	100
	Total	105	100	100	
Do you think pregnancy and labor has high chance hernia?	I do not know	10	9.52	9.52	9.52
	No	2	2	2	11
	Yes	93	88.57	88.57	100
	Total	105	100	100	
Do you think hernia is related to surgery?	I do not know	7	7	7	7
	No	8	8	8	14
	Yes	90	86	86	100
	Total	105	100	100	
Do you think DM patients have a high chance to develop hernia?	I do not know	46	44	44	44
	No	27	26	26	69.52
	Yes	32	30	30	100
	Total	105	100	100	

DISCUSSION

Our study introduced special attention and concern on the risk factors of hernia and the knowledge of the study group on the correlation between hernia and its factors. Furthermore, the present study displayed its important role in the evaluation of the awareness of the risk factors of Hernia. The study involved 105 candidates from

various age stages and level of education from both gender as well.

Risk factors of hernia and the knowledge of the study group on the correlation

Hernia and physical pressure

The results of our study revealed that most of the candidates were able to notice the correlation

between Hernia with the common risk factors which is physical pressure such as (heavy lifting, pregnancy, surgery) with proportions of 89.5%, 88.5% and 86%. In contrast to our results other study indicated that the participants could not connect these risk factors with Hernia with proportions of 87%, 65% and 62% ⁽⁸⁾. Our proportions are considered to be high, also, this conclusion could be occurred because of the way that these factors are ingest to habitation coordinate weight on the groin zone which may result in inguinal hernia. Correspondingly, Flich et al's study showed that physical effort, as risk factor, is connected to the attendance of inguinal hernias. Moreover, unexpected growths in intra-abdominal pressures lead to improvement of diaphragmatic hernias ⁽⁹⁾. Equally important, additional study determined that heavy weight lifting is a substantial interpreter of hiatal hernia reappearance ⁽¹⁰⁾.

Hernia and Asthma

Likewise, improved intra-abdominal pressure caused by exaggerated coughing and straining in patients with asthma. As a result, this plays a major role for incisional hernia following gastric bypass surgery.

The results confirmed the association between asthma and the development of Hernia revealed as the following; the highest rate of the candidates was approving with 59% whilst 26% demanded on having no idea by answering with (I do not know), 15% answered (No). Other study indicated that only 32% of the study group approved the association whilst 34% answered with "No" 34% had no background ⁽¹¹⁾.

Considering another risk factor of Hernia which is the connection of (enlarged prostate, constipation) with Hernia. In addition, some medical problems increase the pressure on the abdominal wall contain draining on the toilet (due to longstanding constipation, for instance) enlarged prostate; straining to urinate ⁽¹²⁾. The present study revealed that the highest rank was approving about the correlation between Hernia and constipation and enlarged prostate with proportions of 81% and 41% respectively.

Hernia and Smoking

In addition, other study carried out on patients with inguinal hernia justified that smoking plays a significant risk factor for reappearance of groin hernia by the fact that smoking could induce

hernia development due to a defective connective tissue metabolism ⁽¹³⁾.

Recent conclusions have shown that the machinery of construction of the hernias can be connected to the collagenous tissues, underneath activity of violent actions such as the tobacco, diabetes and alcohol. Yet, it is important to mention the need of quantitative consequences that can lead to the real modifications of the tissue, mostly in the cremaster muscle ⁽¹⁴⁾. Equally important, some authors stated that patients with hernia of the abdomen wall have diabetes at 8.4% of the cases and define that 43% smoke ⁽⁸⁾. Our results, concluded that candidates could easily relate the connection of Hernia and smoking with proportion of 40% then 34% answered with "No" and 26% claimed to have no knowledge. In the meantime, other study displayed that participants have difficulties in associating Hernia and smoking with proportion 37% ⁽⁸⁾.

The last question assessed the candidates' knowledge about the connotation between Diabetes Mellitus effect on the development of Hernia. It is possible to indicate that partially of the candidates answered with 44% hasn't no idea. On the other hand, 30% claimed with "Yes", whilst 26% answered with "No".

RECOMMENDATION AND CONCLUSION

The present study demonstrated that the study group of Saudis, both gender have knowledge on the risk factors for hernia regardless to the age, gender and level of education. In the face of, 59% related Hernia with asthma, 81% constipation, 40% smoking, 41% enlarged prostate, 88.5% pregnancy, 89.5% heavy lifting, and 86% surgery. Dissimilar, participants no knowledge on relating DM to hernia with proportion of 44%. This indicates the need of further studies to justify our conclusions. We recommend an awareness campaign for hernia risk factors among Saudi adults such as social media.

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