Assessment Level of Awareness about Risk of Using Chronic Steroid Causing Cataract in Saudi Arabia, 2017

Saad Saud Aljuaid[1], Wala Hassan Bakhamees[2], Samah ali alharbi[3], Ibrahim Ahmed Alkulaybi[4], Khaled Freeh Aoudah Alnawaimiss[5], Abdullah Hisham Al-Mulla[6], Faisal Abdullah ALMoumen[7]

1-Taif University, 2-King Abdulaziz University, 3-Ibn Sina National College, 4-Umm Alqura University, 5-Hail University, 6-King Faisal University, 7-Imam Abdulrahman Bin Faisal University

ABSTRACT

Background: the risk of cataract was increased in patients using steroid therapy for long periods in a dose dependent manner.

Objectives: assessing the knowledge of Saudi population toward chronic use of steroid therapy impact on cataract.

Subjects and Methods: this is a cross sectional study conducted from February 2017 to June 2017 among 918 adult subjects randomly chosen from 15 primary health care centers in KSA. All subjects were asked to fill up a questionnaire that included their demographics and questions about using steroid therapy and it effects.

Results: the mean age of included subjects was 58.7 years old, 52% of were males and 48% were females. More than half of included subjects had college degree (51.2%) and 66.8% were working. Only 7.8% of subjects had cataract and 20% of subjects received steroid therapy for more than 4 months per year. The knowledge score was good in 23.3% of subjects and poor in 76.7% of subjects. There was no association between age, gender, and working status but the higher education was significantly associated with good knowledge.

Conclusion: there was inadequate knowledge about cataract induced by using steroid therapy among adult Saudi population and no significant impact of age, gender and working status has been evidenced. But the higher education was associated with higher levels of good knowledge.

Keywords: KSA, Awareness, Cataract, Steroid Therapy.

INTRODUCTION

Corticosteroids have been widely used since its discovery for various types of autoimmune disorders and other inflammatory disease[(1)]. Also, steroids could be used for replacement of adrenal insufficiency, treatment of many ophthalmic, management of various dermatologic, gastrointestinal ophthalmologic, rheumatologic, hematologic, pulmonary and disorders [(2-4)].

Many complications are related to the increasing use of steroids in various conditions especially those related to ocular diseases as increasing the intraocular pressure, glaucoma and cataract [(5, 6)]. Cataract could result in visual impairment which lead to low vision ability and partial or total loss of vision. Aging, diabetic-retinopathy and glaucoma are the most common risk factors for cataract [(7, 8)]. Also, using steroid therapy for long periods could result in [(9)]. The objective of the study was to evaluate the knowledge of Saudi population toward chronic use of steroid therapy impact on cataract.

SUBJECTS AND METHODS

This study is conducted after obtaining the approval from the ethical committee of Faculty of Medicine and a written consent was obtained from all subject included in the research. This was a cross sectional study conducted from the period of February 2017 to June 2017 in a randomly chosen 15 primary health care centers in KSA using the stratified random sampling technique.

Saudi adult subjects who are 50 years old or more either receiving steroid therapy are for more than 4 months during one year or not and who accepted to participate in the study then 918 subjects were enrolled in the study. All subjects were asked to fill up a questionnaire that included their demographics and questions about using steroid therapy and it effects. Another part of the questionnaire included questions about cataract and its prevalence among the studied groups.

According to our knowledge this is the first study assessing the knowledge about cataract and steroids among Saudi subjects thus the questionnaire was collected from previous studies dealing with the pathology of cataract in patients using steroid therapy then the questionnaire was translated into Arabic and tested in a pilot study among 40 Saudi subjects older than 50 years old during 2 weeks for testing the reliability and validity of the questionnaire. The questionnaire

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then was adapted and validated by 3 experts as a reliable instrument. The study was approved by the Ethics Board of Taif University.

Statistical analysis

Data processing was done using the Statistical Package for Social Sciences (SPSS, version 22) for windows. Data were presents as frequencies, percentage and relations. P<0.05 was considered statistically significant.

RESULTS

Demographics of the studied subjects:

Table 1 illustrated the characteristics of included subjects. The mean age of included subjects was 58.7 years old that ranged from 50 to 72 years old. About 52% of respondents were males and 48% were females. More than half of included subjects had college degree (51.2%), 43.3% had a secondary school and only 5.5% underwent primary school. As for the working status 66.8% were working and 33.2% were jobless or retired.

Table (1): Characteristics of Respondents (918)

Age (year)	58.7±3.5	50-72
Male	477	52%
Female	441	48%
Collage	470	51.2%
Secondary School	398	43.3%
Primary School	50	5.5%
Working	613	66.8%
Jobless or retired	305	33.2%

- ***Prevalence of cataract among studied population***

As shown in table. 2, only 7.8% of subjects had cataract and 92.2% had no signs or symptoms of cataract.

Table (2): Sample individuals' distribution according to having cataract or not

No.	**"Do you have cataract?"**	Frequency	Percent
1	No	846	92.2%
2	Yes	72	7.8%
	Total	918	100.0%

- ***Prevalence of steroid therapy use among subjects***

About 20% of subjects received steroid therapy for more than 4 months per year and 79.6% had ever received steroids or received steroids for such long periods. About 36.9% of subjects received systemic steroid therapy, 28.9% received inhaled steroid therapy and 34.2% received topical steroid therapy (Table 3).

Table (3): Sample individuals' distribution according to receiving steroid therapy or not

you have use steroid therapy for than 4 months per year?"	uency	ent
No	31	6%
Yes	87	4%
at is the type of your steroid apy?"		
Systemic	69	.9
Inhaled	64	9%
Topical	64	2%

Assessment of knowledge of included subjects:

Table 4 showed that the majority of participants had good knowledge regarding cataract being as a disease of the eye (80.1% and causing opacity of the eye 56%.On the other had more than half of subjects had poor knowledge about the high incidence of cataract among positive family history (54.1%) and 77% had poor knowledge about aging as a risk factor for cataract. Only 13.7% of subjects answered correctly about risks of diabetes and myopia in incidence of cataract while 86.3% had no knowledge. Also, 57.5% don't know that cataract could result in blindness if left untreated. About 47% of subjects knows that cataract could be treated surgically while 53% answered incorrectly. Most of subjects (64.2%) knew that using steroids for long periods could derive adverse effects. More than half of participants (58.2%) answered incorrectly regarding the usage of steroid therapy in ophthalmology. Only 22.9% of subjects had good knowledge about effects of steroid therapy on intraocular pressure, cataract and glaucoma. Also, only 36% give correct answers regarding the systemic and oral steroids are mostly associated with cataract than topical steroids. Most of subjects (92.2%) had incorrect answers about the use of steroid therapy could disturb the receptors of the eyes thus leads to cataract and eye diseases. Also, 72.1% had poor knowledge about distinguishing steroid induced cataract from other types of cataracts.

Table (4): Knowledge of subjects about steroid cataract:

	Correct	Incorrect
Cataract is a disease of the eye	735 (80.1%)	183 (19.9%)
Cataract is an opacity of the eye lens	514 (56%)	404 (44%)
Cataract has increased risk with positive family history	421 (45.9%)	497 (54.1%)
Aging is the most common risk factor for cataract	211 (23%)	707 (77%)
Diabetes and myopia could result in cataract	126 (13.7%)	792 (86.3%)
Cataract could result in blindness if left untreated	390 (42.5%)	528 (57.5%)
Cataract could be treated surgically if vision is affected	432 (47%)	486 (53%)
Using steroids for long periods have many adverse effects	589 (64.2%)	329 (35.8%)
Steroids are widely used in ophthalmology for inflammation and other eye infections	378 (41.2%)	540 (58.2%)
Using steroids for long time could result in intraocular pressure, cataract and glaucoma.	210 (22.9%)	708 (77.1%)
Systemic and oral steroids are mostly associated with cataract than topical steroids	331 (36%)	587 (64%)
Over use of steroid therapy disturb the receptors of the eyes thus leads to cataract and eye diseases	72 (7.8%)	846 (92.2%)
Steroid induced cataract can be distinguished from other types of cataracts	256 (27.9%)	662 (72.1%)

- **Assessment of knowledge of participants regarding to cataract:**

The total knowledge score was good in only 23.3% of subjects and 76.7% had poor knowledge (Table 5& Figure 1).

Table (5): Knowledge of respondents regarding steroid cataract:

	Knowledge Score
Good Knowledge	214 (23.3%)
Poor knowledge	704 (76.7%)

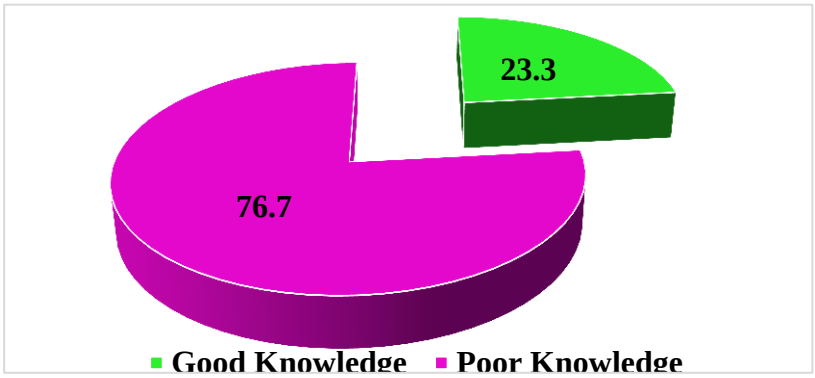

Figure 1. Respondent's Knowledge about steroid cataract

- Association between knowledge and demographics of included participants:

Table 6 indicated that there was no association between age, gender, and working status. However, the higher education indicated a higher significant association with good knowledge.

Table (6): Association between steroid cataract knowledge and socio-demographic variables:

	Good Knowledge (n=214)	Poor Knowledge (n=704)	P-value
50.00 - 61.00	113(23.9%)	360(76.1%)	0.452
62.00 - 72.00	101(22.7%)	344 (77.3%)	
Male	132 (27.7%)	345 (72.3%)	0.123
Female	82 (18.6%)	359 (81.4%)	
Collage	165 (35.1%)	305 (68.9%)	< 0.05
Secondary School	30 (7.5%)	368 (92.5%)	
Primary School	19 (38%)	31 (62 %)	
Working	144(23.5%)	469(76.5 %)	0.362
Jobless	70(23%)	235 (77%)	

DISCUSSION

To the best of our knowledge this was the first cross sectional study conducted in KSA to study the knowledge of adult Saudi population about steroid induced cataract. This study although has some limitations including the included subjects were only adults above 50 years old thus the results can't be generalized to the whole Saudi population. Also, the limitation of time, transportation and previous studies should be considered.

Only 7.8% of subjects had cataract and 20.4% of subjects were using steroid therapy. Also, the knowledge score was very poor among a high percent of respondents indicating a clear gap between health care providers, health authorities and Saudi population.

Also, the lack of knowledge about steroid cataract, the risk factors for having cataract and using steroid therapy for long time declared that not only sociological factors affect the knowledge but also the health care facilities, TV and other media and entertainment means lack for knowledge about steroid cataract.

Although steroids are widely used for treatment of many diseases, patients must follow the instructions of doctors to avoid adverse effects of steroid therapy [(10)]. The risk of both cataract is significantly increased those patients using steroids for long periods and high doses showed a dose dependent risk of cataract [(11, 12)]. Using systemic and oral steroids were significantly associated with cataracts [(13)] but there is some individual variations for the incidence of steroid cataract as some of them may occur secondary to local treatment with even topical eye drops [(14, 15)].

CONCLUSION

There was inadequate knowledge about cataract induced by using steroid therapy among adult Saudi population and no significant impact of age, gender and working status has been evidenced. But the higher education was associated with higher levels of good knowledge. The awareness about cataract should be further encouraged between Saudi subjects to improve the outcomes and enhance early screening and prevention measures of the disease.

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