ORIGINAL ARTICLE

The Perception and Awareness Level about the Risk Factors of Gout among the Indigenous Adult Population of Northern Border Province, Saudi Arabia

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ABSTRACT

Introduction: Gout is an inflammatory condition of joints which is known since ancient times. Hippocrates described many of his observations about this ailment. There are many factors which are associated with the increased risk of the development of gout. The increase in the awareness level in the community about the risk factors of gout may reduce the incidence of this disease.

Aim: To assess the knowledge and perception of people from Northern Border Province -Kingdom of Saudi Arabia about the risk factors of gout**.**

Materials & Methods: This research project has been submitted to the institutional ethical committee and after its approval, the willing participants from the Northern Border Province - Kingdom of Saudi Arabia have been requested to fill the questionnaire.

Results: Two hundred and seventy (270) willing participant completed the questionnaire which included 209 (77.4%) persons with university level education while 61 (22.6%) have the school level education. The majority (91%) of the participants of this study knew that the eating meat increases the risk of gout while only 8% have the knowledge about the eating of seafood as a risk factor of gout and only 33% of the people are aware about the sugar sweetened soft drinks as a risk factor for the development of gout. The persons with university level education have more awareness level as compared to persons with school level education.

Conclusion: Regarding some risk factors of gout, the level of awareness is good among the people but still there are certain important risk factors about which further awareness level needs to be raised in the community.

Key words: Gout; Risk Factors; Hyperuricemia, Awareness level

INTRODUCTION

Gout is an inflammatory condition of joints which most frequently affects the first metatarsophalangeal joint (great toe). It is caused by elevated level of uric acid in the body which may result from increased production and or reduced excretion. Hyperuricemia causes precipitation of urate crystals in the joints which evoke inflammatory process by stimulating the productions of cytokines.

Gout is a disease which is known since ancient times. It had been narrated by Hippocrates who described many of his observations about this disease and he termed it as unwalkable disease which is related to affluent lifestyle[1]. The gout is quite common disease all over the world even in the present time. The prevalence of gout varies from 0.3% to 13.9% in the different regions and its incidence is on rise[2-3].

Multiple factors are associated with the increased risk of the development of gout which includes genetic predisposition, advancing age, duration of hyperuricemia, obesity, alcohol consumption, intake of red meat, eating of seafood and frequent use of sweetened soft drinks while there are certain factors which reduce the risk of gout which include intake of low-fat milk, yogurt, caffeine, vitamin C and tart cherry juice, extract of olive leaves and black seed[4-9].

Increased level of awareness among the people regarding the preventable measures contributes in the reduction of burden of disease in the community. Similarly, the identification of non-preventable risk factors such as advancing age and family history may be helpful in the early detection of disease which may contribute in the reduction in the morbidity associated with this ailment.

The aim and objective of the present study is to assess the knowledge and perception of people from northern border region about the risk factors of gout and compare the level of knowledge among the people belonging to different strata with respect to education level.

MATERIALS AND METHODS

After the approval from the institutional ethical committee, the structured pro-forma has been distributed among the willing participant from the Northern Border Province of Kingdom of Saudi Arabia. In the questionnaire, There are nine questions related to the factors which increase the risk of gout while and it also contains eleven questions about the factors that are associated with reduced risk of gout . The structured questionnaire has been translated in Arabic language for the better understanding of the participants. The completely filled questionnaire have been analysed with the help of computer.

RESULTS

Two hundred and seventy (270) willing participant completed the questionnaire which included 99 (36.7%) between the age of 18 to 25 years of age while 68 (25.2%) participants belonged to age group 26 – 35 years and the remaining 103 (38.1%) participants have the age more than 35 years. In the present study, 209 (77.4%) persons have the university level education while 61 (22.6%) have the school (primary & secondary) level education.

The majority (91%) of the participant of this study knew that the eating meat increases the risk of gout while only 8% have the knowledge about the seafood and only 33% of the people are aware about the frequent use of sugar sweetened soft drinks as a risk factor of gout. Sixty four (64) % of the participants have the knowledge that the Low levels of physical activity is a risk factor of gout. The persons with higher level of education (university level) have higher level of knowledge about the factors associated with development of gout as compared to lower (primary & secondary school) level of education. The results are shown in table 1-2.

Table 1: The level of awareness about the factors which increase the risk of development of gout

Question. Do you think that following increases the risk of Gout?	**Education Level**	**Yes**	**%**	**No**	**%**	**Do not Know**	**%**	**Total**
Overweight / obesity	University	108	52	49	23	52	25	209
	School	35	57	7	11	19	31	61
	Total	143	53	56	21	71	26	270
Eating meat	University	193	92	7	3	9	4	209
	School	52	85	2	3	7	11	61
	Total	245	91	9	3	16	6	270
Eating seafood	University	17	8	138	66	54	26	209
	School	5	8	25	41	31	51	61
	Total	22	8	163	60	85	31	270
Frequent use of sugar sweetened soft drinks	University	72	34	58	28	79	38	209
	School	16	26	11	18	34	56	61
	Total	88	33	69	26	113	42	270
Low levels of physical activity	University	143	68	21	10	45	22	209
	School	29	48	6	10	26	43	61
	Total	172	64	27	10	71	26	270
Advancing age	University	108	52	44	21	57	27	209
	School	33	54	8	13	20	33	61
	Total	141	52	52	19	77	29	270
Male gender	University	97	46	29	14	83	40	209
	School	28	46	9	15	24	39	61
	Total	125	46	38	14	107	40	270
Genetic predisposition	University	70	33	56	27	83	40	209
	School	19	31	13	21	29	48	61
	Total	89	33	69	26	112	41	270
if a close relative has gout / family history	University	70	33	55	26	84	40	209
	School	13	21	8	13	40	66	61
	Total	83	31	63	23	124	46	270

Table 2: The level of awareness about the factors which decrease the risk of development of gout

Question. Do you think / know that following decreases the risk of Gout	**Education Level**	**Yes**	**%**	**No**	**%**	**Do not Know**	**%**	**Total**
Fruits	University	152	73	22	11	35	17	209
	School	49	80	2	3	10	16	61
	Total	201	74	24	9	45	17	270
Vegetables	University	151	72	20	10	38	18	209
	School	43	70	4	7	14	23	61
	Total	194	72	24	9	52	19	270
Low fat milk	University	102	49	34	16	73	35	209
	School	25	41	5	8	31	51	61
	Total	127	47	39	14	104	39	270
Yogurt	University	106	51	34	16	69	33	209
	School	26	43	5	8	30	49	61
	Total	132	49	39	14	99	37	270
Coffee	University	26	12	84	40	99	47	209
	School	6	10	13	21	42	69	61
	Total	32	12	97	36	141	52	270
Vitamin C	University	98	47	33	16	78	37	209
	School	30	49	4	7	27	44	61
	Total	128	47	37	14	105	39	270
Tart cherry juice	University	35	17	41	20	133	64	209
	School	15	25	7	11	39	64	61
	Total	50	19	48	18	172	64	270
Extract from the leaves of olives	University	37	18	43	21	129	62	209
	School	13	21	8	13	40	66	61
	Total	50	19	51	19	169	63	270

Black seed	University	84	40	36	17	89	43	209
	School	24	39	5	8	32	52	61
	Total	108	40	41	15	121	45	270
Drinking sufficient amount of water	University	163	78	17	8	29	14	209
	School	51	84	2	3	8	13	61
	Total	214	79	19	7	37	14	270
Lemon water	University	67	32	36	17	106	51	209
	School	23	38	5	8	33	54	61
	Total	90	33	41	15	139	51	270

DISCUSSION

The result analysis of the present study showed that about certain risk factors of gout such as eating meat, the awareness level is quite good. As 91% of the participants of the study were aware about this risk factor. The awareness level about the consumption meat leading to increase the risk of gout is quite high as compared to the other study in which the 63% of the persons were aware about this risk factor[10]. In the present study, Only 8% of the participants were aware about the seafood as a risk factor which is quite lower than figure of 23% that is reported in another study[11].

Gout is an inflammatory condition of joints due to increased level of uric acid in the body fluids. The hyperuricemia predisposes the precipitation of monosodium urate crystals in the joints which stimulate the inflammatory process.

Gout is known since Hippocrates time who described many of his observations about this disease. Gout is still quite prevalent in the various regions of the world. It is one of the important form of inflammatory joint disease in the males[12]. There are many factors which are associated with the increased risk of the development of gout while certain dietary factors are associated with reduced the risk of gout[13]. For the prevention of the disease in the community, it would be very important to raise the level of awareness about the preventable risk factors of that particular ailment. In the present study, about the certain risk factors (eating meat) which increase the risk of gout, the awareness level in the community is good. But still there are many other factors such as eating seafood or sugar sweetened soft drinks, the awareness level is quite low and it needs to raise for the prevention of gouty attacks.

CONCLUSION

The awareness level regarding factors which increase the risk of development of gout such as eating seafood or sugar sweetened soft drinks need to be raised in the community along with the factors which are associated with reduced risk of gout such as intake of low fat milk, vitamin C and lemon water.

Conflict of interest: None

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