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CORRELATION BETWEEN THE PREVALENCE OF ASTHMA AMONG SMOKERS AND NON SMOKERS IN AL JOUF UNIVERSITY, SAKAKA

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ABSTRACT

This study has focused on the prevelance of asthma in the Smokers and non Smokers in Al Jouf University, Sakaka. However, why the disease burden remains high in this group is unclear. The prevalence rate of asthma among smokers is (7.8%) and among non-smokers is (6.5%). We found that the cigarette smoking is not common among young university students with asthma symptoms

INTRODUCTION

Asthma is a chronic inflammatory disease, associated with airway hyper responsiveness that leads to recurrent episodes of wheezing, shortness of breath and chest tightness (GINA, 2006). Asthmatic complaints are relatively common in children (GINA, 2006; De Jongste, 2002 and Goodman *et al*., 1999). The prevalence of asthma symptoms in children varies between global populations from less than 2% to approximately 33% of the population (GINA, 2003). In the Netherlands in children from 2 to 15 years of age 4–12% experience shortness of breath and 5–20% experience chest wheezing. About 6,5% of 7–12 year olds has asthma (Smit *et al*., 2006). Around one-third of all infants have one or more wheezing episodes in their first years of life (De Jongste, 2002). Asthma mortality is greater among asthmatics who smoke cigarettes compared to asthmatics who do not smoke (Marquette *et al*., 1992 and Ulrik *et al*., 1995). In addition, asthmatic patients who smoke appear to have a reduced therapeutic response to inhaled and oral corticosteroids (Chaudhuri *et al*., 2003 and Lazarus *et al*., 2007). Recent research has identified genes associated with increased risk for asthma in the presence of tobacco smoke exposure (Bouzigon *et al*., 2008) and demonstrated that cigarette smoking is an important independent risk factor for new onset asthma in allergic individuals (Polosa *et al*., 2008). In the general population of adult men, the rate of daily smokers decreased from 52% in 1990 to 39% in 2000, and in women from 26% to 24%, respectively, however, in the years 2002–2005 this trend has not been such pronounced, with 38% smokers among men and 25.6% among women (Marquette *et al*., 1992). Simultaneously, the rate of ex-smokers in the years 1990– 1993 increased after one decade from 14% to 20% (Polosa *et al*., 2008). Additionally, poor asthma control can be due to the reduced therapeutic response to inhaled and oral corticosteroids in asthmatics who smoke (Chaudhuri *et al*., 2003 and Lazarus *et al*., 2007). Asthma is estimated to affect 300 million people worldwide, with an expected increase to 400 million worldwide by 2025 (Masoli *et al*., 2004; Bousquet *et al*., 2005).One of the studies indicates that there was a significant increase in the prevalence of bronchial asthma in the Kingdom of Saudi Arabia during this 9-year from 8% in 1986 to 23% in 1995. (Boulet *et al*., 2008) Cigarette smoking is another factor that can adversely affect asthma control. The prevalence of active smoking among adults with asthma is similar to that among those without asthma, tending to be about 25% in developed countries (Thomson *et al*., 2004).

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Cigarette smoking, both active and passive, can increase susceptibility to developing asthma in predisposed individuals (Thomson *et al*., 2004; Piipari *et al*., 2004). Moreover, for patients with asthma, active smoking is associated with more severe asthma symptoms and a more rapid decline in lung function than for nonsmokers. A better awareness of guideline definitions should therefore be promoted: patients and their families need to understand the nature of asthma symptoms and, most importantly, the criteria defining asthma control. The purpose of this study is to identify the prevalence of bronchial asthma among student in Al Jouf University, northern region of Saudi Arabia.

MATERIALS AND METHODS

This study was a Cross sectional study and was in AlJouf University, northern region of Saudi Arabia. All male Students in Aljouf University are included in this study and we will excluded female and any students from another university.

Study sampling method

This study includes Aljouf university students and we chose a group of student randomly(by select the stratified sample from each college .A total 13 college in the university by dividing the sample size 278 over 13 college, and the result was 21 students from each college. We chose random number N and select the student every N number.

Study selection: samples of students select randomly from Aljouf university population

Study sample size: by using Epi info 7.4 calculator the minimum sample size is 278

Data collection instrument: A standard structured questionnaire will be prepare and validity and reliability will be checked before the study.

Data Analysis: SPSS statistical software was used for data analysis of this study

Ethical consent: Ethical consent was obtained prior to the study from respective authorities.

Plan for data collection: The research team contains 5 students. Everyone was assigned for specific duties one week before the study start.

RESULTS

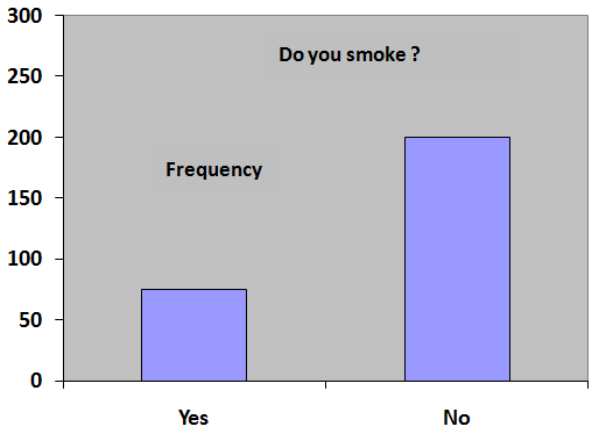

Figure 1. Present number of Smokers and non-smokers

Table 1. Represent the number of students who have parents with asthma

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	44	15.8	15.9	15.9
	No	198	71.2	71.54	87.4
	Don't know	35	12.6	12.6	100.0
	Total	277	99.6	100.0	
Missing	system	1	.4		
Total		287	100.0		

Table 2. Represent the number of students who have sibling with asthma

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	139	50.0	50.0	50.0
	No	79	28.4	28.4	78.4
	Don't know	59	21.2	21.2	99.6
Total		278	100	100	

Table 3 represent the number of students who have parents with allergic rhinitis

		Do you have asthma		Total
		Yes	No	
Do you smoke	yes	6	71	77
	No	13	188	201
Total		19	259	278

This table represent the number of students who have sibling with allergic rhinitis

	Value	df	Asymp. Sig. (2-sided)	Exact. (2-sided)	Exact Sig. (1-Sided)
Pearson chi-Square	.153	1	.695		
Continuity correction	.016	1	.900		
Likelihood Ratio	.150	1	.699		
Fishers Exact Test				.791	.436
Linear-by-Linear Association	.153	1	.696		
N of valid cases	278				

a. 0cells (.0%) have expected count less than 5. The minimum expected count is 5.26 .
b. Computed only for a 2X2 table

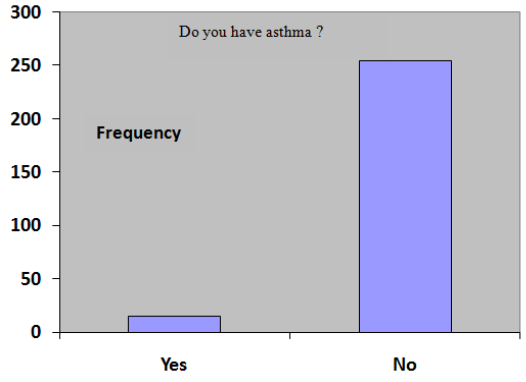

Figure 2. Represent the number of asthmatic patients

DISCUSSION

The prevalence rates of smoking in subjects with asthma have frequently been reported in the literature as similar to those of the general population (Boulet *et al*., 2008). A prospective epidemiological cardiopulmonary study conducted in a sample of the Copenhagen population from 1976 to 2004 showed that the prevalence of smokers among subjects with asthma declined significantly over the study period from approximately 60% to approximately 30% (Browatzki *et al*., 2009). Many papers have speculated on the selection bias in asthma termed the healthy smoker effect but, at least to our knowledge, it has never been demonstrated (Becklake and Lalloo, 1990). In this research and after data analysis We found that the cigarette smoking is not common among young university students with asthma symptoms. The results suggest that the rate of smokers is (27.7%) and non-smokers is (72.3%). The prevalence rate of asthma among smokers is (7.8%) and among non-smokers is (6.5%). By using chi-square test we find that there is no Correlation between the Prevalence of asthma among smokers and non smokers in Al-jouf university. also a study which reported by Thomson NC, Chaudhuri R, Livingston E. said prevalence of active smoking among adults with asthma is similar to that among those without asthma, tending to be about 25% in developed countries (Thomson et6 al., 2004). Risk factors also reported in our research about present of family History of asthma and allergic rhinitis in parents or sibling.

Conclusion

Our findings suggest that cigarette smoking is not common among young university students with asthma symptoms. The results suggest that smokers who are prone to develop asthma either stop smoking or continue to smoke at a moderate rate because of their respiratory symptoms. In conclusion, both active smoking and passive exposure to environmental tobacco smoke have multifaceted effects on bronchial asthma and bronchial responsiveness. There is an urgent need to adopt tobacco cessation and control programs in Saudi Arabia.

REFERENCES

Becklake, M.R., Lalloo, U. 1990. The 'healthy smoker': a phenomenon of health selection? Respiration. 1990; 57(3):137-44.

Boulet, L.P., Dorval, E., Labrecque, M., Turgeon, M., Montague, T., Thivierge, R.L. 2008. 2008. Towards Excellence in Asthma Management: final report of an eight-year program aimed at reducing care gaps in asthma management in Quebec. *Can Respir J.* Sep; 15(6):302-10.

Bousquet, J., Bousquet, P.J., Godard, P., Daures, J.P. 2005. The public health implications of asthma. *Bull World Health Org*. 83:548–554.

Bouzigon, E., Corda, E., Aschard, H., Dizier, M.H., Boland, A., Bousquet, J., Chateigner, N., Gormand, F., Just, J., Moual Le, Scheinmann P, Siroux V, Vervloet D, Zelenika D, Pin I, Kauffmann F, Lathrop M, Demenais F 2008 . Effect of 17q21 variants and smoking exposure in early-onset asthma. N Engl J Med. 359(19):1985–94.

Browatzki, A., Ulrik, C.S., Lange, P. 2009. Prevalence and severity of self-reported asthma in young adults, 1976-2004. *Eur. Respir. J.,* 2009 Nov; 34(5):1046-51.

Chaudhuri, R., Livingston, E., McMahon, A.D., Thomson, L., Borland, W., Thomson, N.C. 2003. Cigarette smoking impairs the therapeutic response to oral corticosteroids in chronic asthma. *Am. J. RespirCrit Care Med*. 168:1308–1311.

De Jongste, J.C., Janssens, H.M., van der Wouden, J. 2002. Effectiveness of pharmacotherapy in asthmatic preschool children. Allergy. 57:42–47.

GINA, Global Initiative for asthma, NIH Publication No. 02-3659; 2003. Pocket guide for asthma management and prevention in children (based on the workshop report Global strategy for asthma management and prevention)

Global Strategy for Asthma Management and Prevention 2006. Global Initiative for Asthma (GINA);

Goodman, D.C., Lozano, P., Stukel, T.A., Chang, C., Hecht, J. 1999. Has asthma medication use in children become more frequent, more appropriate, or both? *Pediatrics*. 104:187–194.

Lazarus, S.C., Chinchilli, V.M., Rollings, N.J., Boushey, H.A., Cherniack, R., Craig, T.J., Deykin, A., Dimango E., Fish, J.E., Ford, J.G., Israel, E., Kiley, J., Kraft, M., Lemanske, R.F. Jr, Leone, F.T., Martin, R.J., Pesola, G.R., Peters, S.P., Sorkness, C.A., Szefler, S.J., Wechsler, M.E., Fahy, J.V. 2007. Smoking affects response to inhaled corticosteroids or leukotriene receptor antagonists in asthma. *Am J RespirCrit Care Med.* 175(8):783–90.

Litonjua, A.A. 2006. The significance of beta2-adrenergic receptor polymorphisms in asthma. *Curr Opin Pulm Med.* 12:12–17.

Marquette, C., Saulnier, F., Leroy, O., Wallaert, B., Chopin, C., Demarcq, J., Durocher, A., Tonnel, A 1992. Long-term prognosis of near-fatal asthma. *Am Rev Resp Dis*. 146:76–81.

Masoli, M., Fabian, D., Holt, S., Beasley, R. 2004. The global burden of asthma: executive summary of the GINA Dissemination Committee report. Allergy. 59:469–478.

Piipari, R., Jaakkola, J.J., Jaakkola, N., Jaakkola, M.S. 2004. Smoking and asthma in adults. *Eur. Respir. J*. 24:734–739.

Polosa, R., Knoke, J.D., Russo, C., Piccillo, G., Caponnetto, P., Sarvà, M., Proietti, L., Al-Delaimy, W.K. 2008. Cigarette smoking is associated with a greater risk of incident asthma in allergic rhinitis. *J. Allergy. ClinImmunol*. 121(6):1428–34.

Smit, H.A., Boezen, H.M., Poos, M.J.J.C. 2006. Hoe vaakkomtastmavoor en hoeveelmensensterveneraan? Volksgezondheid Toekomst Verkenning, Nationaal Kompas Volksgezondheid. Bilthoven: RIVM. 2006.

Thomson, N.C., Chaudhuri, R., Livingston, E. 2004. Asthma and cigarette smoking. *Eur Respir J*. 24:822–833.

Ulrik, C.S., Frederiksen, J. 1995. Mortality and markers of risk of asthma death among 1075 outpatients with asthma. Chest. 108:10–15.

Zatonski, W., Przewozniak, K. 2004. (Operative goal No. 3: A decrease in the prevalence of tobacco smoking). In (Control of expected effects of the National Health Program fruition) Edited by: Gorynski P, Wojtyniak B, Kuszewski K. Warszawa: PZH; 49-58.

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