

## Comparison of the Varicocele Frequency in Mouth Organ Musician and Drivers

Bijan Rezakhaniha,<sup>1</sup> Soheila Siroosbakht,<sup>2</sup> Iraj Mirzaii-Dizgah<sup>3</sup>

1. Department of Urology, School of Medicine, Aja University of Medical Sciences, Tehran, Iran
2. Department of Pediatrics, Aja University of Medical Sciences, Tehran, Iran
3. Department of Physiology, Aja University of Medical Sciences, Tehran, Iran

Article information	Abstract
<p>Article history: Received: 12 Feb 2011 Accepted: 14 July 2011 Available online: 29 Dec 2011</p> <p>Keywords: Varicocele Valsalva maneuver Wind instruments players Drivers</p> <p>*Corresponding author at: Department of Physiology, Aja University of Medical Sciences, Tehran, Iran E-mail: emirzaii@razi.tums.ac.ir</p>	<p><b>Background:</b> Varicocele is the most prevalent cause of infertility in men. This study examined the prevalence rate of the disease in wind instrument players and drivers.</p> <p><b>Materials and Methods:</b> In this cross-sectional study, a total of 42 wind instrument players of a military band and 31 drivers working for Iran's military were selected and the varicocele rate in their left and right testis was analysed.</p> <p><b>Results:</b> The varicocele prevalence rate was higher in players than in drivers. Furthermore, the left testis was affected more than the right one by this disorder.</p> <p><b>Conclusion:</b> It seems that both prevalence and rate of varicocele are higher in the left testis rather right one. Wind instrument players whose acts are along with valsalva maneuver suffer from this disease more than other people.</p>

Copyright © 2012 Zahedan University of Medical Sciences. All rights reserved.

### Introduction

Varicocele is treated as a prevalent and treatable cause of infertility in men and it affect the left testis more than the right one. Its prevalence rate in normal men has been reported 15-20% and in infertile men 21-41%; out which 60%, 27% and 13% are ranked as type I, type II, and type III, respectively [2]. It has been reported that the prevalence of varicocele has been 22% in 1170 military staff (aged 22-30 years) to which most of them suffered from varicocele type II and III [3]. It has been shown that the secretions of gonadotropins and prolactin increase prior to surgery in patients with varicocele. Studies have shown that aging causes increasing of varicocele prevalence and histological changes of testicular tissues [4-6].

Likewise, increased intra-abdominal pressure due to childhood or early adulthood obesity can be a risk factor for developing of varicocele [7]. Since the military wind instruments players reproduce valsalva maneuver while playing in the standing position and the abdominal pressures, including valsalva maneuvers, can increase the risk of developing varicocele, the study compares the prevalence of varicocele among wind instruments players and military drivers who are less at risk of valsalva maneuvers.

### Materials and Methods

In this cross-sectional study, a total of 48 wind instruments players and 34 drivers who had not underwent any heavy activities were selected. Six players

and three drivers were excluded because of their former abdominal surgeries.

After signing written consents, the volunteers were consciously included. They were examined separately by an urologist. Both prevalence rate and varicocele type (degree) were compared using Chi-squared statistical method ( $\chi^2$ ) and  $p < 0.05$  was considered statistically significant.

### Results

The mean age was  $31.4 \pm 5.3$  years in the music group and  $32.7 \pm 4.4$  years in the driver group and the mean weights of them were  $77.1 \pm 5.4$  and  $79.6 \pm 9.7$  kg respectively which there was no any significant difference there. The prevalence of varicocele was significantly higher in music group (31%) than drivers ( $p < 0.032$ ). For the music group, the involvement degree of the left testis was higher than that in driver group, while no significant difference was seen in the rights testis in both groups (Table 1).

**Table 1.** Prevalence degree of varicocele among wind instruments players and drivers

		Varicocele degree				P
Group		0	1	2	3	
Left testis	Players	74	12	10	4	0.042
	Drivers	93	4	3	0	
Right testis	Players	90	10	0	0	0.3
	Drivers	97	3	0	0	

## Discussion

Varicocele is the most prevalent cause of infertility in men and increased intra-abdominal pressure is one of the risk factor for the disease. In this study, the prevalence rate and type of varicocele in wind instruments players, who are at more risk of valsalva maneuver, and drivers of military vehicles, who are less at risk of such abdominal pressures, were evaluated. The results showed that the prevalence of varicocele in the music group was higher than that in the drivers group, and either its prevalence or severity was higher in the left testis than the right one. The prevalence rate of varicocele among men has been reported about 15% [2].

Hanig et al. (1993) reported varicocele in 10-20% of all examined men in their study [8]. Zargooshi et al. examined 1170 military staff and they found that 22% of 22-30 years old staff suffered from varicocele [3]. In the same direction, in a study conducted in the urology clinic of Imam Reza Hospital in Tehran, out of 218 military clients who suffered from testicular pain, 53 percent had varicocele. Thus, with regard to our results, the varicocele prevalence among wind instruments players has been higher than normal level, while it was normal for the drivers.

Scaramuzz et al. found that, due to obesity or valsalva maneuver, intra-abdominal pressure has been high in 348 youth with varicocele [7]. It seems that there is a relation between high rate of varicocele in music group and their

type of activity involved with valsalva maneuver and long-term standings.

The results indicated that the left testis (72%) is at risk of varicocele very higher than the right testis (28). It is consistent with the results of other studies [9, 10]. Lipshultz et al. examined 585 patients with varicocele. They found the prevalence rate of the disease in the left and right testis 90% and 10%, respectively [1].

It seems that the prevalence and severity of varicocele in the left testis are higher than those in the right testis particularly in players of the wind instruments whose activity brings about valsalva maneuver. Therefore, according to our studies, some helpful measures must be conducted with the aim of preventing this disease and its physical and mental impacts in workplace and homes.

## Acknowledgements

Authors appreciate contribution of all volunteers in this study.

## Authors' Contributions

All authors contributed in all stages of the study.

## Conflict of Interest

No conflict.

## Funding/Support

There was no funding.

## References

1. Lipshultz LI, Corriere JN Jr. Progressive testicular atrophy in the varicocele patient. *J Urol* 1977; 117(2): 175-6.
2. Jarow JP. Effects of varicocele on male fertility. *Hum Reprod Update* 2001; 7(1): 59-64.
3. Zargooshi J. Sperm count and sperm motility in incidental high-grade varicocele. *Fertil Steril* 2007; 88(5): 1470-3.
4. Santoro G, Romeo C. Normal and varicocele testis in adolescents. *Asian J Androl* 2001; 3(4):259-62.
5. Akbay E, Cayan S, Doruk E, et al. The prevalence of varicocele and varicocele-related testicular atrophy in Turkish children and adolescents. *BJU Int* 2000; 86(4): 490-3.
6. Oster J. Varicocele in children and adolescents. An investigation of the incidence among Danish school children. *Scand J Urol Nephrol* 1971; 5(1): 27-32.
7. Scaramuzza A, Tavana R, Marchi A. Varicoceles in young soccer players. *Lancet* 1996; 348(9035): 1180-1.
8. Honig SC, Thompson S, Lipshultz LI. Reassessment of male-factor infertility, including the varicocele, sperm penetration assay, semen analysis and in-vitro fertilization. *Curr Opin Obstet Gynecol* 1993; 5(2): 245-51.
9. Braedel HU, Steffens J, Ziegler M, et al. A possible ontogenic etiology for idiopathic left varicocele. *J Urol* 1994; 151(1): 62-6.
10. Buschi AJ, Harrison RB, Norman A, et al. Distended left renal vein: CT/sonographic normal variant. *AJR Am J Roentgenol* 1980; 135(2): 339-42.

*Please cite this article as:* Rezakhaniha B, Siroosbakt S, Mirzaii-Dizgah I. Comparison of the varicocele frequency in mouth organ musician and drivers. *Zahedan J Res Med Sci (ZJRMS)* 2012; 14(6): 31-32.