

Predictors of obstructive sleep apnea in snorers- statistical errors

To the Editor: I have read with great interest the recently published article by Ibrahim and colleagues¹ in the *Annals of Saudi Medicine* and I appreciated the authors' efforts and work. However, I would like to make few comments on it because of the apparent flaws in results.

First, the authors mentioned in the abstract that 39% of the females had obstructive sleep apnea (OSA) with a mean of respiratory disturbance index (RDI) of 27.8 ± 26.5 . In Table 1, it was shown that 17 of 41 females were RDI positive, which constituted 41.5% and not 39%.

Second, in the results text, the authors stated that "OSA was seen more in non-Qatari (n=84) subjects versus in Qatari subjects (n=38). The sum of both groups was 122, not 126 study participants, who were diagnosed as OSA unless there were 4 participants of unknown nationality, there is an error. Third, the authors again contradict what was shown in Table 1 where they mentioned that females (of the OSA group) had a non-significant higher mean age of 51.8 ± 8.2 years compared to 48.7 ± 9.4 years in males. The table showed that figure 51.8 ± 8.2 years belonged to females in the RDI negative group and not the OSA group, whereas the second figure did not exist at all. Moreover, the statistical analysis in the table compared between the age of OSA group and the negative group among males and females separately.

Fourth, in the discussion, on page 424, the authors stated that "the frequency of PSG diagnosed OSA was 72.4%", whereas the correct figure was previously mentioned by them as 66% (126

cases of 191 participants).

Fifth, in the discussion, the authors more than once, used the word "several studies", whilst mentioning only a single study (as in line 3 and line 8 in the second column of page 424). Moreover, they ignored explaining an important finding in their study, which was the nonsignificant association of age with the degree of severity of OSA as shown in both the bivariate and multivariate analysis in Tables 2 and 3.

Finally, I would like to stress that statistical input to medical research is widely recommended but inconsistently obtained. Therefore, authors should involve statisticians in all the steps of their research and recognize them by either authorship or acknowledgment.²

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REFERENCES

1. Ibrahim AS, Almohammed AA, Allangawi MH, A Sattar HA, Mobayed HS, Pannerselvam B, Philipose MV. Predictors of obstructive sleep apnea in snorers. *Ann Saudi Med.* 2007;27(6):421-6.
2. Altman DG, Goodman SN, Schroter S. How Statistical Expertise Is Used in Medical Research. *JAMA.* 2002;287:2817-20

Reply from author

I appreciate the valuable comments of Dr. Mustafa Afifi regarding the article: "Predictors of obstructive sleep apnea in snorers", published in the November-December 2007 *Annals of Saudi Medicine*. The comments were noted on a few unnoticed statistical errors that happened during the preparation of the manuscript that do not affect the overall text. Please note the following corrections marked in bold

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1. In the abstract section: 41.5% of the female group had obstructive sleep apnea.

2. In the results text: OSA was seen more in non-Qatari subjects (86 of 116, 74.1%) versus [40 out of 75 (53.3%)] in Qatari subjects ($P < 0.05$).

3. In Table 1, the mean age in females in the RDI positive group is 51.8 ± 8.2 and the RDI negative group is 50.3 ± 10.7 . The statistical analysis shown in the table compares the positive RDI group versus the negative RDI group in the same gender. The ANOVA test was used to derive the significance of age difference for males and females in the positive RDI group.

4. On page 424, the frequency of PSG diagnosed as OSA is 66% as mentioned in the abstract and not 72.5% as it appeared in the text.

I agree with Dr. Mustafa that we used the word "several studies" in the text without indicating references, probably just giving examples of some studies, but adding it now would not be practical. Along with this is adding discussion regarding the relation of age to the severity.

I would like to add that valuable statistical input was acknowledged in our study, though having statisticians in all steps of research would be of great help.

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Comment from the *Annals*

The comments made by Dr. Afifi are quite pertinent. It is unfortunate that the authors have not carefully checked their data and statistics. In

the journal, we make every possible effort to ensure the accuracy of the data published, but it is almost impossible to detect all possible errors, especially when it comes to calculations and percentages as it would be futile to recalculate all percentages and other mathematical expressions. We realize that publishing errors occur in all international journals, but we are not happy when it occurs in the *Annals* and especially when more than one error occurs in the same article, as in this case. Although the authors do not think that these errors have affected the overall results of the study, we in the *Annals* remain concerned about this issue. It is the responsibility of the authors to ensure the accuracy of all the data submitted. Errors raise questions about the integrity of the data and the ethical procedures followed in performing the study, issues that we strive to ensure but obviously cannot fully assess.

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Influence of fasting during Ramadan on intra-ocular pressure

To the Editor: The month of Ramadan is a holy month for Muslims during which they fast from sunrise until sunset. The prolonged dietary restrictions during this month can lead to changes in hematocrit and electrolyte imbalance. The aim of this study was to evaluate the influence of fasting during the month of Ramadan on intraocular pressure (IOP). We performed a prospective cohort study on 144 eyes of 72 normal Muslim patients observing a period of fasting during the month of Ramadan. Patients with glaucoma or a family history of glaucoma, and systemic

diseases were excluded. Eleven patients did not come back for follow-up and were also excluded.

A complete ophthalmological exam was done with IOP measured by applanation tonometry of Goldman. These measures were performed during the third week of Ramadan and 5 weeks later. The two measures were taken at the same moment of the day (at noon), by the same examiner and by the same tonometer that had been calibrated before.

The mean age of our patients was 49 years old and 52.8% were males. During the month of Ramadan, the mean value of IOP was 13.86 mm Hg for the right eye and 13.97 mm Hg for the left eye. After Ramadan, the mean value of IOP increased to 14.5 mm Hg for the right eye ($P=.13$) and 13.97 mm Hg for the left eye ($P=.10$) but remained statistically insignificant. The stratified analysis according to sex found no statistically significant difference between men and women during ($P=.5$) or after the month of Ramadan ($P=.7$).

Ramadan is the ninth month of the lunar year. Fasting during this month constitutes the fourth of the five fundamental bases on which Islam is built. The prolonged dietary restrictions can lead to changes in hematocrit and electrolytic imbalance¹ and even to an increase in the incidence of central retinal vein occlusion² and to changes in lachrymal secretion.³ Only three studies in the literature have addressed the relationship between fasting and IOP.^{4,6} One concluded that fasting in healthy adults does not modify diurnal IOP. We had the same results in our study even though lower values during Ramadan were recorded. The third study⁶ reported different results, with a mean that decreased significantly during fasting.

Several physiopathological hypotheses have been proposed to explain the reason for IOP alteration during fasting. The likeliest explanation is that the dehydration induced by fluid restriction causes an aqueous humor reduction and thereby a decrease in IOP. Secondly, depletion of fat stores during fasting causes a decrease in prostaglandin secretion and an IOP decrease.⁴ Another survey showed that conditions of dehydration and fasting produce a significant reduction of the blood flow velocity of retrobulbar vessels measured by color Doppler ultrasonography.⁵ Our study did not record any variation by sex. The inclusion of women in our study may have confounded the results since premenopausal women do not fast during menstruation. However, this confounding effect is unlikely since most of the women in this study were postmenopausal and were fasting. The absence of an influence of fasting on the IOP suggests that the practice of Ramadan can be allowed in glaucomatous patients without any modification of therapy.

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REFERENCES

1. Abdalla AH, Shaheen FA, Rassoul Z, Owda AK, Popovich WF, Mousa DH, et al. Effect of Ramadan fasting on muslim kidney transplant recipients. *Am J Nephrol.* 1998; 18(2): 101-104.
2. Alghadyan AA. Retinal vein occlusion in Saudi Arabia: possible role of dehydration. *Ann Ophthalmol.* 1993; 25(10): 394-398.
3. Kayikcioglu O, Erkin EF, Erakgun T. The influence of religious fasting on basal tear secretion and tear break up time. *Int Ophthalmol* 1999; 22(2): 67-69.

letters

4. Dadeya S, Kamlesh, Shibal F, Khurana C, Khanna A. Effect of religious fasting on intra-ocular pressure. *Eye*. 2002(4);16:463-5.
5. Inan UU, Yuçel A, Ermis SS, Oztürk F. The effect of dehydration and fasting on ocular blood flow. *J Glaucoma*. 2002(5); 11:411-5.
6. Kayıkcioglu O, Guler C. Religious fasting and intra-ocular pressure. *J Glaucoma*. 2000; 9(5): 413-414.

External jugular vein aneurysm: a rare cause if neck swelling

To the Editor: In contrast to arterial aneurysms, true venous aneurysms are rarely encountered.¹ Aneurysmal dilatations in cervical veins are rare due to low pressure in the vena cava system.

A 4-year-old male was admitted to our clinic with a progressive swelling in the right side of the neck. The swelling was well demonstrated by the Valsalva manoeuvre. The swollen part had developed 2 months prior to admission to our clinic. The mass localized laterally to the right sternocleidomastoid mus-

cle. Physical examination revealed a soft, round, mobile, non-pulsating mass approximately 5×4 cm in diameter. Other systems were normal. The differential diagnosis included a laryngocele, a superior mediastinum tumor or cyst and a venous aneurysm. Diagnosis was made using multi-slice computed tomography (MSCT). MSCT of the region of the abnormality revealed an external jugular vein aneurysm (Figure 1A, B). An operation was performed under general anesthesia. The aneurysm was freed from the neighboring tissues by separation with supraclavicular incision, and an aneurysmal dilatation was extracted. The postoperative course was uneventful. Histopathological examination revealed congested vein structures with thinning in the elastic layer. The lesions were therefore evaluated as true venous aneurysms. The patient was discharged the day after surgery, and remained asymptomatic for the next year.

We suggest that such venous an-

eurysms should be considered for surgery, because of important complications such as pulmonary embolism, thrombophlebitis, rupture and thrombus formations.² Although these are quite rare, it is important to keep such a rare entity in mind in the differential diagnosis of swellings in the neck region.

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REFERENCES

1. Ekim H, Ozen S. Primary venous aneurysm of the external jugular vein. *EJM* 2002; 7: 24-5.
2. Matsuura Y, Higo M, Yamashina H, Tamura M, Kitaoka T, Fukuhara T, et al. A case report of venous aneurysm of the neck vein. *Jpn J Surg* 1981; 11(1): 39-42.

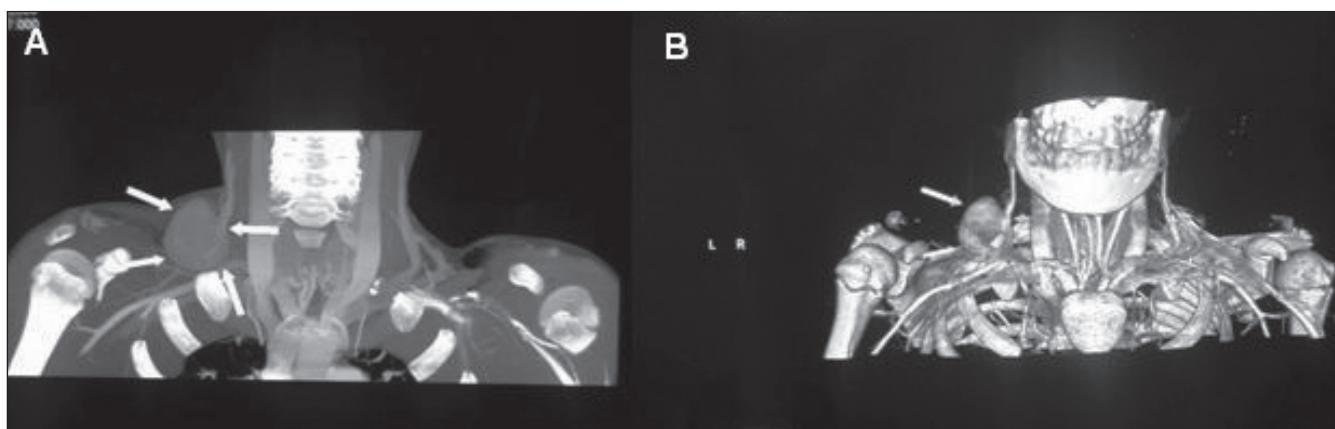


Figure 1. Multi-slice computed tomography depicts right external jugular vein aneurysm (arrows).