

Letters to the Editor

Improving the Quality of Reporting a Cohort Study

Dear Editor:

An article titled «The effect of extremely low frequency electromagnetic fields on pregnancy and fetal growth, and development» was published in *Arch Iran Med.* 2013; **16(4)**: 221 – 224.¹ This study was an epidemiologic analytical cohort study based on Strengthening the Reporting of Observational Studies in Epidemiology (STROBE). The title of the article should specify the study design and indicate the methodology,^{2,3} however, the above mentioned title seems to indicate that this study is a randomized trial.^{3,4} Rather, this is a cohort study.

Epidemiological studies are prone to confounders. The use of appropriate statistical tests is necessary to control confounding. One of the methods used in data analysis is the regression model, which by entering all confounding factors causes a decrease in confounding.⁵ Chi-square and *t*-tests alone cannot control confounding. Therefore, the use of a regression model reduces confounding factors and adjusts the results.^{2,5} In cohort studies, incidence, relative risk and absolute risk (in a meaningful time period) should be reported.^{2,3} In conclusion, I would like to mention that for improving the results of the study, relative risk and absolute risk should be reported and confounding should be controlled.

Hamid Salehiniya MSc, ¹Tehran University of Medical Sciences, Tehran, Iran. ²Birjand Atherosclerosis and Coronary Artery Research Center, Birjand, Iran. Email: alesaleh70@yahoo.com.

References

1. Mahram M, Ghazavi M. The effect of extremely low frequency electromagnetic fields on pregnancy and fetal growth, and development. *Arch Iran Med.* 2013; **16**: 221 – 224.
2. Vandembroucke JP, von Elm E, Altman DG, Gøtzsche PC, Mulrow CD, Pocock SJ, et al. Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): explanation and elaboration. *PLoS Med.* 2007; **4**: e297.
3. von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandembroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Prevent Med.* 2007; **45**: 247 – 251.
4. Moher D, Hopewell S, Schulz KF, Montori V, Gøtzsche PC, Devereaux PJ, et al. CONSORT 2010 explanation and elaboration: updated guidelines for reporting parallel group randomised trials. *BMJ.* 2010; **340**: c869. doi: 10.1136/bmj.c869.
5. McNamee R. Regression modelling and other methods to control confounding. *Occup Environ Med.* 2005; **62**: 500 – 506.

Peroneal Nerve Palsy after Rapid Weight Loss Due To Uncontrolled Diet in a Patient Treated With Oral Isotretinoin

Dear Editor:

We read the study of Entezari-Maleki et al. with great interest.¹ The authors assessed evaluation of isotretinoin use and they found

that the doses of isotretinoin are incorrect in many cases, nor have patients been properly counseled about isotretinoin teratogenicity and the seriousness of its side effects.

Isotretinoin's main indication is for the treatment of severe nodular cystic acne. Although it is a potent therapeutic agent, the drug has several adverse effects. If patients are not accurately informed about adverse effects and how to manage them, negative results may occur.

On this occasion we would like to share our experience. We present a rare case of peroneal palsy due to massive weight loss that resulted from an uncontrolled diet in order to avoid triglyceride alteration induced by isotretinoin.

Case: An 18-year-old male patient presented with right foot drop accompanied by decreased sensation over the dorsum of the right foot. The patient's medical findings and family history were unremarkable. The risk factors related to peroneal palsy in a healthy adolescent were searched. He denied prolonged leg crossing, history of any leg fracture and casting. He had been on isotretinoin treatment for his acne for a three-month period and was advised to pay attention his diet because this drug is associated with increased triglyceride levels. The patient undertook an uncontrolled strict diet and lost 15 kg (20% of his body weight) over a two-month period. Systemic examination was normal. On the neurological assessment, there was complete weakness (1/5 strength) of his right foot dorsiflexion and eversion in addition to numbness over the dorsum of the right foot. Deep tendon reflexes were normal. Routine laboratory examinations, radiographic examination of the patient's right knee and the lumbar spine magnetic resonance imaging were normal. On electrophysiological evaluation, there was a complete conduction block at the level of the fibular head. He was diagnosed with peroneal neuropathy (PN) due to weight loss for which he received nutritional support, physical therapy and a foot orthosis. Within a few months, improvement was observed.

The peroneal nerve usually develops entrapment neuropathy caused by external compression located mainly at the fibular head where the nerve runs superficially and causes PN. PN has been linked to endocrine or metabolic disorders such as diabetes mellitus, alcoholism, thyrotoxicosis or vitamin B depletion as well as mechanical causes. Also the association between weight loss and the development of pressure paralysis of the peroneal nerve has been described. Because the nerve is only covered with skin, subcutaneous tissue and fat pad, any excessive weight loss that reduces the fatty cushion protecting the nerve is susceptible to pressure damage.²⁻⁴ There is no established association between PN and isotretinoin. Chroni et al. have determined in their study that short-term administration of oral isotretinoin in young patients does not cause clinical or subclinical neuropathy.⁵

In conclusion, the loss of more than 15% of body weight can lead to the development of PN. Therefore it is important to keep this mind. In patients who take isotretinoin, a balanced diet should be recommended.

Ozgur Zeliha Karaahmet¹, Tacettin Mirzaoglu¹, Ece Unlu¹, Aytul Cakir¹
Authors' affiliation: ¹Department of Physical Medicine and Rehabilitation, Dişkapı Yıldırım Beyazıt Educational and Research Hospital, An-

kara, Turkey.

•**Corresponding author:** Ozgur Zeliha Karaahmet MD, Department of Physical Medicine and Rehabilitation, Dışkapı Yıldırım Beyazıt Educational and Research Hospital, 06080 Altındag- Ankara, Turkey. Fax: +90-312-318-6690, E-mail: drozguroz@gmail.com.

References

1. Entezari-Maleki T, Hadjibabaie M, Dousti S, Salamzadeh J, Hayatshahi A, Javadi MR, et al. Evaluation and Monitoring of Isotretinoin use in Iran. *Arch Iran Med.* 2012; **15**: 409 – 412.
2. Sotaniemi KA. Slimmer's paralysis—peroneal neuropathy during weight reduction. *J Neurol Neurosurg Psych.* 1984; **47**: 564 – 566.
3. Woltman HW. Crossing of the legs as a factor in the production of peroneal palsy. *J Am Med Assoc.* 1929; **93**: 670 – 672.
4. Cruz-Martinez A, Arpa J, Palau F. Peroneal neuropathy after weight loss. *J Peripher Nerv Syst.* 2000; **5**: 101 – 105.
5. Chroni E, Pasmatzis E, Monastirli A, Georgiou S, Katsoulas G, Polychronopoulos P, et al. Short-term oral isotretinoin therapy does not cause clinical or subclinical peripheral neuropathy. *J Dermatolog Treat.* 2006; **17**: 6 – 8.

Serum Visfatin Levels Should Be Evaluated with Further Markers of Endothelial Inflammation

Dear Editor:

We read the article “Elevated Serum Visfatin Levels in Patients with Acute Myocardial Infarction” written by Mazaherioun et al. with interest.¹ The authors aimed to assess any potential relationship between blood visfatin levels, anthropometric variables, and known risk factors of atherosclerosis and acute myocardial infarction (AMI). They determined that serum visfatin levels were significantly higher in AMI patients compared to controls. This finding was consistent with other studies that have shown a contribution of visfatin to atherosclerosis and plaque destabilization which, in turn, leads to myocardial infarction. We believe that these findings will act as a guide for further studies about risk factors of atherosclerosis and AMI.

Coronary artery disease is a major public health problem in Iran² and one of the leading causes of death worldwide.³ Obesity is one of the most important risk factors for atherosclerosis of the coronary arteries, and consequently, increases the risk of myocardial infarction. Adipose tissue is an energy storing organ with endocrine properties which has a role in systemic vascular inflammation. Various pro- and anti-inflammatory mediators and cytokines are secreted from adipose tissue. Adiponectin, a peptide hormone and member of the family of adipokines, is absolutely expressed in and secreted by adipocytes and adipose tissue.⁴ It has also been shown that adipokines regulate different stages of atherosclerosis,

from endothelial dysfunction to plaque destabilization and rupture. Visfatin is a novel adipokine with different functions, for which exist a plethora of research on its characteristics and roles. Visfatin levels may change in patients with inflammation such as diabetes mellitus, hypertension, obesity, metabolic syndrome, cardiovascular disease, hyperlipidemia, hormonal abnormality, known malignancy and smoking habit.

In addition, any abnormality in thyroid function tests, known malignancy, anemia, smoking and any medication such as statins can potentially interfere with inflammation and might change visfatin levels. Thus the authors should have excluded all of these factors in this study. Secondly, the selection of control group was not correctly defined in this study. For example, they have not explained whether or not the control group underwent coronary angiographies. Therefore some control group patients might have coronary artery disease. It would be better if the authors had defined these factors in the study group.

Finally, visfatin alone in the absence of other inflammatory markers may not give information to clinicians regarding the patient's endothelial inflammatory condition. In our opinion we believe it should be evaluated together with other serum inflammatory markers.

There is no conflict of interest.

Sevket Balta MD*¹, Sait Demirkol MD¹, Mustafa Cakar MD², Omer Kurt MD², Murat Unlu MD¹, Ugur Kucuk MD¹

Authors' affiliations: ¹Department of Cardiology, Gulhane Medical Academy Ankara, Turkey, ²Department of Internal Medicine, Gulhane Medical Academy Ankara, Turkey.

•**Corresponding author:** Sevket Balta MD, Department of Cardiology, Gulhane School of Medicine, Tevfik Saglam St., 06018 Etilik-Ankara, Turkey. Tel: +90-312-3044281, Fax: +90-312-3044250, E-mail: drsevketb@gmail.com

References

1. Mazaherioun M, Hosseinzadeh-Attar MJ, Janani L, Vasheghani Farahani A, Rezvan N, Karbaschian Z, et al. Elevated serum visfatin levels in patients with acute myocardial infarction. *Arch Iran Med.* 2012; **15**: 688 – 692.
2. Shahraz S, Barzanjeh A, Bahari A, Nadery Y, Farzadfar F, Beyranvand MR, et al. The completeness of medical records to assess quality of hospital care: the case of acute myocardial infarction in a district-level general hospital in Iran. *Arch Iran Med.* 2012; **15**: 592 – 595.
3. Nazeri I, Shahabi P, Tehrai M, Sharif-Kashani B, Nazeri A. Impact of calcification on diagnostic accuracy of 64-slice spiral computed tomography for detecting coronary artery disease: a single center experience. *Arch Iran Med.* 2010; **13**: 373 – 383.
4. Shams M, Rasekhi Kazerouni A, Ostovan MA, Omrani GR. The relationship between serum adiponectin levels with the presence and severity of coronary artery disease. *Arch Iran Med.* 2012; **15**: 611 – 616.