

Type 2 diabetes mellitus and ABO/Rh blood groups

Sir,

Many studies have designed to determine the association between ABO blood group phenotypes and many disorders, including stomach carcinoma and peptic ulcer.^[1,2] There are controversies studies reports regarding association of diabetic mellitus type 2 and blood groups.^[3-10] Therefore, we evaluate this association in Iranian type 2 diabetics compared with normal population.

This study was conducted in central part of Iran (Isfahan) in 2012 on 130 diabetic patients and 7996 normal population as the control group. Participants in both case and control groups were selected using convenience time-based sequential sampling method.

A total of 8126 participant were evaluated. Mean age was (49.23 ± 12.58). 5143 were male and 2983 were female. Table 1 shows the distribution of the blood groups in diabetes mellitus patients and controls.

Blood group B+ was more common in diabetic patients (30.8% in case group vs. 24.9% in controls), but it was not statistically significant ($P = 0.746$).

In case group, 115 (88.5%) patients had positive and 15 (11.5%) patients had negative Rh blood group. In control group, 7111 (88.9%) participants had positive and 885 (11.1%) had negative Rh blood groups ($P = 0.865$).

As there were several controversies in different ethnic groups, we may suggest performing more developed

studies considering ethnicity as a contributing factor in patients with diabetic mellitus.

Forouzan Moinzadeh¹, Gholamreza Mahdieh Najafabady², Ali Toghiani³

¹Departments of Pathology, Islamic Azad University, Najafabad Branch, Najafabad, ²Najafabad Satellite Blood Center, Esfahan Blood Transfusion Center, ³Young Researchers and Elite Club, Islamic Azad University, Najafabad Branch, Najafabad, Isfahan, Iran

Address for correspondence: Dr. Ali Toghiani, Young Researchers and Elite Club, Islamic Azad University, Najafabad Branch, Isfahan, Iran.
E-mail: alitoghiani@gmail.com

REFERENCES

1. Aird I, Bentall HH, Roberts JA. A relationship between cancer of stomach and the ABO blood groups. *Br Med J* 1953;1:799-801.
2. Aird I, Bentall HH, Mehigan JA, Roberts JA. The blood groups in relation to peptic ulceration and carcinoma of colon, rectum, breast, and bronchus; an association between the ABO groups and peptic ulceration. *Br Med J* 1954;2:315-21.
3. Discussion on the ABO blood groups and disease. *Proc R Soc Med* 1955;48:291.
4. Andersen J, Lauritzen E. Blood groups and diabetes mellitus. *Diabetes* 1960;9:20-4.
5. Henry MU, Poon-King T. Blood groups and diabetes. *West Indian Med J* 1961;10:156-60.
6. Okon UA, Antai AB, Osim EE, Ita SO. The relative incidence of diabetes mellitus in ABO/Rhesus blood groups in South-Eastern Nigeria. *Niger J Physiol Sci* 2008;23:1-3.
7. Kamil M, Al-Jamal HAN, Yusoff NM. Association of ABO blood groups with diabetes mellitus. *Libyan Journal of Medicine* 2010;5:1.
8. Koley S. The distribution of the ABO blood types in patients with diabetes mellitus. *Anthropologist* 2008;10:129-32.
9. Stern MP, Ferrell RE, Rosenthal M, Haffner SM, Hazuda HP. Association between NIDDM, RH blood group, and haptoglobin phenotype. Results from the San Antonio Heart Study. *Diabetes* 1986;35:387-91.
10. Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. Report of the expert committee on the diagnosis and classification of diabetes mellitus. *Diabetes Care* 2003;26 Suppl 1:S5-20.