



Multiple Sclerosis in Parsis: A Historical Issue

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(Received 14 Jan 2013; accepted 04 Feb 2014)

Dear Editor-in-Chief

I enthusiastically studied Parviz et al. article (1). It was an exceptional description of the possibility that great Persian and Andalusian physicians like Haly Abbas and Ibn Rushd might be familiar with optic neuritis and its relationship with paresthesia. This has not only been significant in medical history and proves the role of Persian traditional medicine in promoting science but also presents the hypothesis that in the old Persia, multiple sclerosis (MS) (the two common symptoms of which are optic neuritis and paresthesia) was probably prevalent to the extent that physicians were familiar with these cases and even described them.

The author of the present study is aware that this is a big claim and proving it would need more precise review and inspection of Persian traditional medical texts which should be scrutinized by medical history researchers.

Author of the present study decided to provide other relevant evidences including the prevalence of MS in a group of Iranian immigrants known as Parsis.

Parsis of India are Zoroastrian Iranians that immigrated to India over 1000 years ago and are still living there (2). It is the fact that in recent years exogamies have become common and the youth marry followers of other religions; however, they are still considered in a single genetic package. In other words, Parsis of India might be exclusive samples for studying genetic status of ancient Per-

sians due to being a minority and their cultural and religious attachments with Iran. It should be considered that conditions of Zoroastrians are different from other minorities like Jews or Assyrians. In terms of origin, Iranian Jews immigrated to Iran at the time of the Great Cyrus and after the release of Jerusalem (3) and Assyrians had their specific native land (4). Although other minorities like Armenians and Mandaeans are thought to be culturally Iranians, their genetic roots are different (5, 6). However, Iranian and Indian Parsi Zoroastrians are excluded. In fact, they are only different from Muslim Iranians in their religion. It should be mentioned that Muslim Iranians were previously Zoroastrians (7) and then converted to Islam; so Parsis are not genetically different from other Iranians. The only difference is genetic mixing of Muslim Iranians due to more exogenous cultural and genetic marriages than the Zoroastrians. Consequently, if we mean to know about our genetic roots and initial genetic mapping of the Iranians, these Parsis should be studied.

As mentioned earlier, it has been over 1000 years that Parsis are living among Indians. According to statistics reported on the effect of immigration on MS, persons below 15 years immigrating from a high-risk to a low-risk region would adjust with the conditions of the target society and the risk of developing the disease would follow the pattern of that society (8). We know India as a low-risk re-

gion and the prevalence of MS is low (9). Thus, it seems that after over 1000 years, Parsis should have a low risk of developing the disease based on the statistics. Yet, the statistics are quite contrary. In the two studies conducted on Parsis of India (10, 11) statistics of MS patients were significantly higher than the other groups in India. This shows that there is a factor keeping the nation prone to MS despite the change of environment. It is important to know that MS is etiologically a multifactorial disease and both environmental and genetic factors play a role in its incidence (12). Other Indians are less prone to MS and as the environment of Parsis does not have a significant role, the only remaining factor would be genetics. In other words, there should be a genetic factor that has resisted throughout 1000 years. There is a basic problem here and that is Iran was statistically classified among low-risk regions (13). It means, if there was a strong genetic factor in Iranians, why it has not been active at all times and among all groups of the nation? I assume that one of the most important reasons can be racial mixing among Iranians residing in Iran. The said factor has weakened the genetic effect while presently change of environment has practically paved the way for the effect of the silent gene and once again, the prevalence of MS has increased and reached 51.9 per 100,000 (13).

Hence, it can be said that high prevalence of MS among Parsis shows conditions of Iranians 1000 years ago when physicians like Haly Abbas and Ibn Rushd were practicing medicine and inherited their experiments in remarkable books like the *Kitab al-Maliki* and *Kulliyat*.

Acknowledgements

The author declares that there is no conflict of interests.

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