

Stevens-Johnson syndrome/toxic epidermal necrolysis in Jewish and Arab populations

To the Editors:

We have recently reported on antiepileptic drug (AED-) and non-AED-related cases of Stevens-Johnson syndrome/toxic epidermal necrolysis (SJS/TEN) in Israel.^{1,2} A subanalysis of the cases in which SJS/TEN was associated with AEDs (mostly phenytoin, lamotrigine, and carbamazepine) now reveals a relatively high percentage of Arabs and Jews of North African and Middle Eastern origin (combined) in this cohort. Of the 16 Israeli patients, 4 were Arab. The other 12 were Jews, among whom the country of origin was recorded for 7, including 2 patients from Morocco and one from each of the following countries: Iraq, Lebanon, former USSR, and Ethiopia (total 8 Middle Eastern Jews, North African Jews and Arabs vs 2 others). A patient from France was not included in the group analysis due to uncertainty regarding her ethnic origin, although the majority of French Jews originate from Algeria, Tunisia, and Morocco.³ An additional patient, an Arab from the Gaza strip, was also excluded to allow comparisons to Israeli population databases.

By the end 2016, Arabs (excluding Druze) and Jews of Moroccan, Iraqi, and Lebanese origin comprised 19.1%, 5.6%, 2.6%, and 0.4% of the Israeli population, respectively (total 27.8%).⁴ If these populations were similarly represented in the SJS/TEN cohort of 10 AED-exposed patients, this would have translated to 3 AED-associated SJS/TEN cases ($P < .001$;

Fisher's exact test). For comparison, among the 9 patients who developed SJS/TEN following consumption of drugs other than AEDs, one was Bedouin, one a Lebanese Jew, 4 Ashkenazi Jews, one Bulgarian Jew, one Ethiopian Jew ($P = .054$ versus the AED group), and one of mixed Jewish origin. The numbers are small, and bias may be introduced by different prevalence of AED indications and hospitalization rates among subpopulations in the studied hospitals. Yet, our finding may also suggest that genetic variability exists among Jewish and Arab populations in terms of their propensity to develop SJS/TEN following exposure to AEDs.

Recently, HLA-A*24:02 was reported to be a common genetic risk factor for cutaneous adverse reactions induced in Han Chinese by carbamazepine, lamotrigine, and phenytoin.⁵ The newly published data of the Ezer Mizion Bone Marrow Donor Registry,⁶ which includes 275 699 individuals of 19 subethnic Jewish and Arab populations, reveals that the distribution of this allele in Israeli populations is unique: 10.13% in Israeli Arabs and 9%-15% in Jews from the Caucasus (15.0%), Tunisia (12.0%), Morocco (11.4%), Poland (9.0%), and Iraq (8.8%) carry HLA-A*24:02. Among all the other published Israeli subpopulations, including Ashkenazi (other than Polish), Yemen, and Libya Jews, as well as the Druze, the allele frequency is 3% or less (Figure 1). These figures suggest that some Jewish and Arab ethnic groups

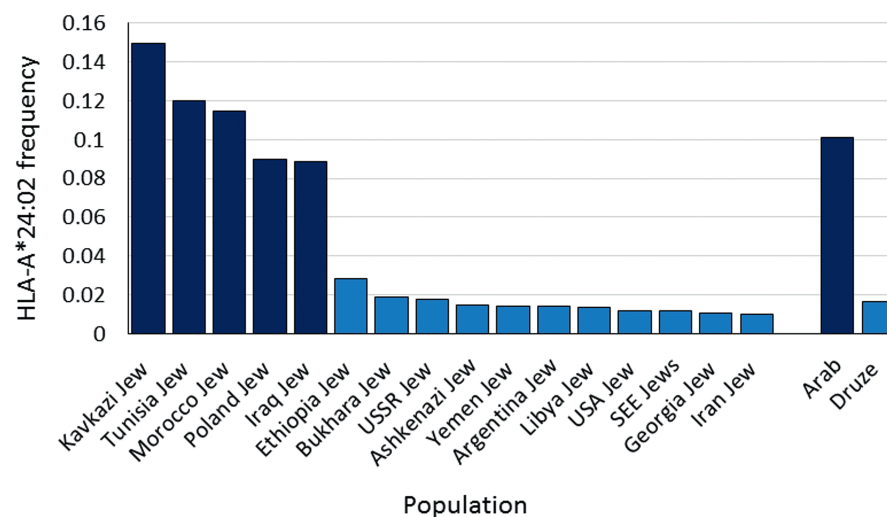


FIGURE 1 Frequency of HLA-A*24:02 (carriers of at least one allele) in Israeli Jewish and Arab populations. SEE include Romania, Bulgaria, Moldova, Greece, Yugoslavia, Albania, Serbia, Transylvania and Cyprus. Kavkazi, from the Caucasus region. Based on Manor et al., 2016⁶

might be at greater risk of severe cutaneous adverse reactions when treated with aromatic AEDs compared to other subpopulations. Clearly, carrying this allele might not be sufficient for developing these reactions, even in populations in which the allele frequency is high. Until data from pharmacogenetic studies are available, Arabs and Jews of certain North African and Middle Eastern origins require greater attention upon initiation of treatment with aromatic AEDs.

DISCLOSURE

The authors declare no conflicts of interest. We confirm that we have read the Journal's position on issues involved in ethical publication and affirm that this report is consistent with those guidelines.

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Announcements

Epilepsia – July 2018 – Announcements

4th Dianalund Summer School on EEG and Epilepsy

15–21 July 2018

Dianalund, Denmark

Application and Announcement: <https://www.ilae.org/congresses/4th-dianalund-summer-school-on-eeeg-and-epilepsy>

16th Advanced San Servolo Epilepsy Course

16–27 July 2018

San Servolo (Venice), Italy

Application and Announcement: <https://www.ilae.org/congresses/16th-advanced-san-servolo-epilepsy-course>

8th International Summer School for Neuropathology and Epilepsy Surgery (INES 2018)

26–29 July 2018

Erlangen, Germany

Information: <https://www.ilae.org/congresses/8th-international-summer-school-for-neuropathology-and-epilepsy-surgery-ines-2018>

4th Summer School on Imaging in Epilepsy: SuSIE 2018

12–15 August 2018

Marburg, Germany

Website: <http://www.imaging-in-epilepsy.org/>

YES ECE Meeting

25 August 2018

Vienna, Austria

To be held ahead of the European Conference on Epileptology in Vienna.

13th European Congress on Epileptology

26–30 August 2018

Vienna, Austria

Website: www.epilepsyvienna2018.org

ESTM 2018 Vienna: Epilepsy Surgery Techniques

31 August–1 September

Vienna, Austria

Satellite symposium for the European Congress on Epilepsy

Website: <http://www.estm2018.at/>

Congreso de Epilepsia (2018. LACE)

13–14 September 2018

Liga Argentina

Chapter website: <http://www.lace.org.ar/>

9th International Summer School for Neuropathology and Epilepsy Surgery (INES 2018)

17–20 September 2018

Beijing, China

Information: <https://www.ilae.org/congresses/9th-international-summer-school-for-neuropathology-and-epilepsy-surgery-ines-2018>

16th Pan Arab Union of Neurological Societies (PAUNS) Meeting

19–22 September 2018

Amman, Jordan

More information: <https://www.ilae.org/congresses/16th-pan-arab-union-of-neurological-societies-pauns-meeting>

International Symposium on Severe Infantile Epilepsies: Old and New Treatments (ISSET 2018)

20–22 September 2018

Vatican City, Rome, Italy

Website: <http://www.ptsrroma.it/isset2018/>

Cleveland Clinic Epilepsy Update & Review Course

22–24 September 2018

Ohio, USA

CME Credits available

Website: <http://www.clevelandclinicmeded.com/live/courses/epilepsy-update/>

CLAE / LCCE 2018 Scientific Meeting

21–23 September 2018

St. John's, Newfoundland

Website: <https://canadianleagueagainstepilepsy.wildapricot.org/page-1816302>

ILAE British Chapter Annual Scientific Meeting

26–28 September 2018

Birmingham, UK

Website: <http://www.ilaebritishconference.org.uk/>

Irish Chapter of the ILAE 8th Annual Expert Day

28 September 2018

Dublin, Ireland

More information: <https://www.ilae.org/congresses/irish-chapter-of-the-ilae-8th-annual-expert-day>

10th Latin American Congress on Epilepsy

29 September–2 October 2018

San José, Costa Rica

Website: <http://epilepsysanjose2018.org/>

6th Global Symposium on Ketogenic Therapies for Neurological Disorders: Embracing Diversity, Global Implementation and Individualized Care

5–9 October 2018

Jeju, Korea

Website: www.ketoconnect.org

46th Annual Meeting of the International Society for Pediatric Neurosurgery (ISPN 2018)

7–11 October 2018

Tel Aviv, Israel

Website: <http://www.ispnmeeting.org/2018>

Hungarian Chapter of the ILAE

12 October 2018

Chapter website: <http://www.epilepszia.hu/>

Journées Françaises de l'Epilepsie

16–19 October 2018

Lyon, France

<https://www.jfe-congres.fr/>

6th UAE Epilepsy Congress

26–27 October 2018

Dubai, United Arab Emirates

More information: <https://www.ilae.org/congresses/6th-uae-epilepsy-congress>

32nd Epilepsy Society of Australia Annual Scientific Meeting

31 October–2 November 2018

Brisbane, Australia

Website: <https://www.epilepsy-society.org.au/conferences/esa-asm.asp>

Video-EEG in Paediatric Epilepsies: From seizures to syndromes

1–3 November 2018

Tutored course with case presentation and interactive sessions
Madrid, Spain

More information: <https://www.ilae.org/congresses/video-ee-g-in-paediatric-epilepsies-from-seizures-to-syndromes>

Swedish Chapter National Meeting

15 November 2018

Lund, Sweden

2018 AES Annual Meeting

30 November–4 December 2018

New Orleans, Louisiana, USA

American Epilepsy Society website: <https://www.aesnet.org/>

Annual Meeting of the Austrian and German Societies for Epileptology and the Swiss Epilepsy League (“Dreilaendertagung”)

8–11 May 2019

Basel, Switzerland

www.epi.ch/fach

13th World Congress on Controversies in Neurology (CONy)

4–7 April 2019

Madrid, Spain

Congress website: <http://comtecmed.inwise.net/CONyCongress2019>

7th London-Innsbruck Colloquium on Status Epilepticus & Acute Seizures

7–9 April 2019

London, UK

Congress website: <https://statusepilepticus.eu/index.php>

33rd International Epilepsy Congress

22–26 June 2019

Bangkok, Thailand

Website: <http://internationalepilepsycongress.org/>