Zeitschrift für
Epileptologie

Erwiderung zum Leserbrief

Z. Epileptol. 2022 · 35 (Suppl 2):S103–S104
https://doi.org/10.1007/s10309-022-00529-1
Accepted: 14 September 2022
Published online: 4 November 2022

Driving eligibility following acute symptomatic seizures due to a structural brain lesion – English Version

Martin Holtkamp[1,2] · Eva Breuer[2] · Verena Gaus[1] · Rebekka Lehmann[2] · Eberhard Siebert[3] · David Steinbart[1] · Bernd Vorderwülbecke[1,2]

[1] Epilepsy-Center Berlin-Brandenburg, Department of Neurology with Experimental Neurology, Charité—Universitätsmedizin Berlin, Berlin, Germany

[2] Epilepsy-Center Berlin-Brandenburg, Institute for Diagnostics of Epilepsy, Ev. Krankenhaus Königin Elisabeth Herzberge, Berlin, Germany

[3] Institute of Neuroradiology, Charité—Universitätsmedizin Berlin, Berlin, Germany

The German version of this article can be found under https://doi.org/10.1007/s10309-022-00513-9.

Scan QR code & read article online

Reply

This reply refers to Krämer G, Specht U (2022) Driving eligibility for group 1 and 2 licenses after an acute symptomatic seizure due to a structural brain lesion. Z Epileptol. https://doi.org/10.1007/s10309-022-00528-2.

Original publication

Holtkamp M, Breuer E, Gaus V, Lehmann R, Siebert E, Steinbart D, Vorderwülbecke B (2022) Driving eligibility following acute symptomatic seizure with structural brain lesion – English Version. Z Epileptol. https://doi.org/10.1007/s10309-022-00485-w

We thank the chairmen of the Driving Licence Commission of the German Society of Epileptology, Günter Krämer and Ulrich Specht, for their constructive comments on our presentation of a case with an acute symptomatic seizure due to a structural brain lesion and its implications on driving eligibility. We would like to respond briefly in a few points.

1. Acute symptomatic seizures due to a structural brain lesion may be rarely seen in epilepsy centres but are frequently seen in acute neurological care. Twenty-five to 40% of first epileptic seizures are acute symptomatic [1], often due to structural causes. Therefore, we very much welcome that this constellation is to be included in the revised German guidelines on driving eligibility. This will help clinicians in acute care hospitals to correctly inform patients about driving eligibility for licence categories 1 and 2. The guidelines' recommendations should be easy to understand and to follow, even though the underlying subject matter may be complex.
2. It makes sense to use the absolute seizure risk during the following year ("chance of an occurrence of a seizure in the next year", COSY) as a yardstick for assessing driving eligibility in categories 1 (< 20%) and 2 (< 2%). We agree with Krämer and Specht that an individual COSY assessment is desirable but often impossible due to insufficient data. For example, as mentioned by Krämer and Specht, the significance of EEG abnormalities after acute symptomatic seizures is controversial. It is not evident that the COSY after intracerebral haemorrhage is necessarily higher than after cerebral ischaemia [2, 3].
3. Strictly speaking, the COSY after an isolated unprovoked seizure is not well documented either, since previous studies did not apply currently valid definition criteria. Kim et al. 2006 [4] did not require an unremarkable cranial MRI; the 'unprovoked idiopathic' group in Brown et al. 2015 [5] also included first manifestations of genetic generalised and 'cryptogenic' epilepsies.

Nuanced long-term studies following current standards are needed; for the time being, we have to make do with the available data.

4. The graph by Brown et al. 2015 [5] does not prove that the risk of subsequent seizures after a structurally caused, acute symptomatic first seizure is higher than after an isolated unprovoked seizure. Current evidence suggests that in either case, the COSY 6 months after the index seizure is well below 20%. Therefore, in either case, patients should be allowed to return to driving a motor vehicle up to 3.5 t (category 1) after 6 months.
5. If a COSY of 2% were used as a basis for driving licence category 2, patients with acute symptomatic seizures due to a structural brain lesion would indeed not be allowed to drive a vehicle after 2 years. However, this would then have to apply equally to patients with isolated unprovoked seizures, because here, according to previous evidence, the COSY 2 years after the index seizure is over 2% as well. Such a paradigm shift would have significant practical consequences.

Finally, we advocate that for the many users with limited epileptological expertise, the guidelines on driving eligibility should provide clear instructions based on simple categories. In individual cases, a more differentiated assessment may be necessary; the COSY can serve as a useful tool here.

Corresponding address

Prof. Dr. med. Martin Holtkamp
Epilepsy-Center Berlin-Brandenburg, Department of Neurology with Experimental Neurology, Charité—Universitätsmedizin Berlin
Charitéplatz 1, 10117 Berlin, Germany
martin.holtkamp@charite.de

Conflict of interest. M. Holtkamp, E. Breuer, V. Gaus, R. Lehmann, E. Siebert, D. Steinbart and B. Vorderwülbecke declare that they have no competing interests.

The supplement containing this article is not sponsored by industry.

References

1. Hauser WA, Beghi E (2008) First seizure definitions and worldwide incidence and mortality. Epilepsia 49(Suppl 1):8–12
2. Haapaniemi E, Strbian D, Rossi C et al (2014) The CAVE score for predicting late seizures after intracerebral hemorrhage. Stroke 45(7):1971–1976
3. Galovic M, Döhler N, Erdelyi-Canavese B et al (2018) Prediction of late seizures after ischaemic stroke with a novel prognostic model (the SeLECT score): a multivariable prediction model development and validation study. Lancet Neurol 17(2):143–152
4. Kim LG, Johnson TL, Marson AG et al (2006) Prediction of risk of seizure recurrence after a single seizure and early epilepsy: further results from the MESS trial. Lancet Neurol 5(4):317–322
5. Brown JW, Lawn ND, Lee J, Dunne JW (2015) When is it safe to return to driving following first-ever seizure? J Neurol Neurosurg Psychiatry 86:60–64