Letter by Coutinho et al Regarding Article, “Mortality of Cerebral Venous–Sinus Thrombosis in a Large National Sample”

To the Editor:

With interest we read the recent article by Borhani et al regarding the mortality of cerebral venous thrombosis. The authors have managed to collect mortality rates on the largest set of patients of this rare disease. Their study confirms the previous finding from the International Study on Cerebral Vein and Dural Sinus Thrombosis (ISCVT) that mortality is very low. The identified predictors of mortality are also largely the same as those that were associated with death or dependency in the ISCVT, including age, malignancy, central nervous system infection, and intracranial hemorrhage. We found it somewhat surprising, however, that the authors did not examine the association between mortality and gender. In the ISCVT, male gender was associated with a worse outcome at follow-up (hazard ratio, 1.59; 95% CI, 1.01–2.52). In a post hoc analysis of the same study, significantly more women had completely recovered after 6 months (81% versus 71%, P=0.01) and there was a trend toward a lower mortality in women as well (6% versus 10%, P=0.10). Considering the large power of the study by Borhani et al, it would be interesting to see if the relation between gender and outcome is confirmed as well.

The most surprising result of the study, however, is the frequency of “pyogenic” cerebral venous thrombosis. This group consisted of >80% of all patients. Although cerebral venous thrombosis due to an infection was very common in the preantibiotic era, it is currently quite rare, at least in the Western world. In the ISCVT study, only 12.3% of patients had an underlying infection as a risk factor, similar to other large published cohorts of the past 30 years. Even in developing countries, the reported fraction of pyogenic cerebral venous thrombosis is only 18%. It is therefore likely that the overrepresentation of pyogenic cerebral venous thrombosis is the result of coding errors. The frequency of noninfective risk factors for thrombosis among the pyogenic cases would also points in this direction. If this were the case, it would make the comparison between the 2 groups irrelevant, but it would not affect the overall conclusions regarding mortality. Another possible explanation, however, is that the overrepresentation of pyogenic cerebral venous thrombosis is caused by an underreporting of nonpyogenic cerebral venous thrombosis. This option is more worrisome, because this would mean that a significant bias in case selection occurred, which might decrease the validity of the entire study.

Disclosures

None.

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Stroke. 2012;43:e22; originally published online January 12, 2012;
doi: 10.1161/STROKEAHA.111.642462
Stroke is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
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Print ISSN: 0039-2499. Online ISSN: 1524-4628

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://stroke.ahajournals.org/content/43/2/e22

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