Commentary on: Racette S, Sauvageau A. Brain arteriovenous malformation and its implication in forensic pathology. J Forensic Sci 2007;52(1):189–91.

Sir:

We found the recent case report of the pediatric sudden death due to brain arteriovenous malformation (BAVM) to be timely and provocative (1). Those of us who study the clinical treatment and epidemiology of the disease may not have considered its role in forensic pathology.

We do want to caution, however, about overestimating the prevalence of BAVMs. The true prevalence of the disease is much lower than the 700/100,000 (0.7%) cited in the article. The reference for this estimate comes from MRI screening of pilot candidates in Germany (2,3). In the original article, the actual prevalence of BAVMs was five in 1772, or 282/100,000 (0.28%). The 0.7% referred to all cases with pathologic findings, not just BAVMs.

The prevalence rate for clinically detected BAVMs is closer to 20/100,000 (4,5). This estimate comes from large population-based studies in which geographical areas refer patients with neurologic diagnoses to centralized health organizations. The study of German pilot candidates is a relatively small study. As a screening study it may have a higher sensitivity for asymptomatic BAVMs than the population-based studies, but it will need confirmation. The current case report by Racette and Sauvageau is especially interesting

because we do not know how the prevalence of BAVMs differs in children (6).

## References

- Racette S, Sauvageau A. Brain arteriovenous malformation and its implication in forensic pathology. J Forensic Sci 2007;52(1):189–91.
- Mohr JP. Brain arteriovenous malformations: children and adults (editorial). Stroke 2005;36:2060–1.
- 3. Weber F, Knopf H. Cranial MRI as a screening tool: findings in 1,772 military pilot applicants. Aviat Space Environ Med 2004;75(2):158-61.
- Berman MF, Sciacca RR, Pile-Spellman J, Stapf C, Connolly ES, Mohr JP, et al. The epidemiology of brain arteriovenous malformations. Neurosurgery 2000;47(2):389–97.
- Al-Shahi R, Fang JS, Lewis SC, Warlow CP. Prevalence of adults with brain arteriovenous malformations: a community based study in Scotland using capture-recapture analysis. J Neurol Neurosurg Psychiatry 2002;73:547–51.
- Fullerton HJ, Achrol AS, Johnston SC, McCulloch CE, Higashida RT, Lawton MT, et al. Long-term hemorrhage risk in children versus adults with brain arteriovenous malformations. Stroke 2005;36:2099–104.

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