Measure twice, think three times, cut once

L. Noyez

When I was a child, my father taught me how to fix a punctured tyre. He stressed the importance of checking the whole tyre, even if I had already found a puncture, because there could always be more. In addition, he made me check the outer tyre for sharp pieces that could again damage the inside tyre.

When I was a medical student, I observed the surgery of a young man with a stab wound in his abdomen. The surgeon proudly showed me the perforation of the stomach and subsequently oversutured it. Two days later, the patient underwent a second operation for peritonitis, during which a perforation of the bowel was found.

In their paper *Measure twice, cut once*, Chaldoupi et al. describe a related problem.¹ Two patients with supraventricular tachycardia were incorrectly diagnosed and treated for nodal reentrant tachycardia (AVNRT).

The gist of these problems is related to the diagnostic decision-making process. As doctors, we have learned to work towards a diagnosis through a process of elimination, dubbed 'differential diagnosis'. Ultimately, this process is to result in one final diagnosis, for which the patient will then be treated. The doctor initiates this process by taking into consideration several clues from anamnesis, clinical examination and medical tests, as well as his own knowledge of medicine and his personal experience.

Thanks to this process, coming up with a diagnosis is of course easier. However, with every step in the process, one or more possible but less likely diagnoses are overlooked. It is important to realise

that both the taking into account and the disregarding of certain diagnoses is based on theories of probability, in which only the diagnoses that are most likely to be correct are included in the continuation of the process. As long as we keep this in mind, we will also realise that our final diagnosis involved the omission of at least some less likely, yet possible diagnoses. Therefore, it is of the utmost importance to both perform and verify every step in the process in a correct, precise and thorough manner. Eventually though, with every final diagnosis, one has to question whether or not some alternative possibilities need to be reconsidered. At this point, knowledge and experience again prove to be essential qualities.

In the case described by Chaldoupi et al.,¹ it seems reasonable that the patients should have been examined for the presence of a dual atrioventricular pathway or a concealed accessory atrioventricular pathway. Yet, to use a Dutch proverb, the best helmsmen always stand on shore. As Chaldoupi et al. themselves admit, a differential diagnosis is a complicated task and even Knight et al. describe it as a potential pitfall.² But should we thus look upon this publication as blame for the primary physicians? I do not think so. What this publication does instigate, however, is a necessary reflection upon our own diagnostic methodologies. ■

References

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- 2 Knight BP, Zivin A, Souza J, et al. A technique for the rapid diagnosis of atrial tachycardia in the electrophysiology laboratory. *J Am Coll Cardiol*. 1999;33:775-81.

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