How good at neurology are you?

Every time I get the wrong answer in the ‘Test yourself’ section, my belief in subspecialization, for the benefit of our patients, is reinforced. I have hesitated writing, but eventually decided that the recent question on central core disease (Practical Neurology, 2003, 3, 251–253) merited further comment. The take-home message is simple and important – central core disease may...
be associated with malignant hyperthermia, which is most likely to develop in association with general anaesthesia and which can be fatal. A patient is described whose neuromuscular symptoms were limited to ‘never been great at sport and he was the one who always dropped the ball in his family’, and whose father died unexpectedly during anaesthesia. I appreciate the constraint of space available to the question setters, but three issues require further comment.

Firstly, it is suggested that the ‘best way to confirm the diagnosis’ would be to review the father’s notes, the implication being that if central core disease was confirmed in the father, then it could be assumed that the son had the same condition. Experience with many genetic disorders shows that such an approach is fundamentally flawed. Particularly when a parent has an autosomal dominant disorder, with 50:50 risk of transmission, time and again we see anxiety and introspection leading to unfounded concern that a child is developing symptoms of the disease. I frequently see families with conditions such as Charcot-Marie-Tooth disease and facioscapulohumeral muscular dystrophy, in which there is anxiety on behalf of either the parents or the child that the child is developing problems, such as clumsiness of gait or winging of the scapulae, when subsequent testing proves that the child has not inherited the disorder. Even experienced examiners may ‘over-interpret’ signs in such offspring. The point, quite simply, is that the diagnosis in the offspring must be proved by appropriate assessment, not by implication. Not everybody who is poor at games and can’t catch a ball has a neuromuscular disorder.

Secondly, the advice given to the anaesthetist was to ‘Proceed with the operation but do not administer curare-like agents’. That is far from adequate. Although succinylcholine can trigger malignant hyperthermia, volatile anaesthetics, particularly halothane, are a much more potent trigger.

Finally, there was an unfortunate choice of histology. The H&E section shows entirely non-specific ‘myopathic’ changes without a core in sight. The characteristic cores are best seen with oxidative enzyme reactions, such as NADH.

Few general neurologists will have experience of central core disease or malignant hyperthermia but in this increasingly litigious age lack of personal experience is not a defence against incorrect advice.

**RESPONSE**

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Dr Hilton-Jones’s comments are gratefully received. He highlights an important limitation of multiple choice/short answer questions where it is often difficult to strike the right balance between providing enough information to make the reader select the desired diagnosis, whilst not making the question too easy. The questions, although largely based on cases personally seen, are inevitably artificial. Like crosswords, one needs to get into a particular mindset. In this particular question we were really just trying to make a pragmatic point that if his father had died from a primary surgical mishap the level of concern would be different. The (sub) specialist advice and perspective is, however, welcomed and encouraged.