Simon Morgan

Test in peace

As usual, I finished with a cartoon. It pictured a patient sitting on the examination couch with a spear through his head and the white-coated doctor saying *'I'm pretty sure I know what the problem is, but just to be sure I'm ordering a battery of tests.'*

It had been a provocative session. I had presented on the exponential increase in test ordering over recent decades, and the consequent costs (real and opportunity) to health systems around the world.[1] We had discussed the challenges of managing 'incidentalomas', illustrated by a recent patient I had looked after with an angiomyolipoma of the kidney identified as a result of a request for a scrotal ultrasound. No word of a lie. And we debated the very real harm that overtesting can inflict on patients, both direct, (for example radiation from CT scans), and indirect ('tests beget tests beget biopsies beget sepsis'). I had introduced some new terminology to their lexicon — investigation momentum,[2] a phrase which will always remind me of a Bruce Willis movie, and the trusty availability heuristic[3] (*'My previous GP trainer once picked up an ovarian cancer with a screening Ca125, so I usually add one too'*).

So after my humorous flourish, I invited questions to close the 2-hour workshop. One of the GP trainees raised their hand and hesitantly asked *'But I'm still really worried about missing something.'* A chorus of similar concerns followed. It was apparent that we were going to run late into morning tea.

As a medical educator working in a postgraduate vocational training programme, I have cultivated a strong interest in overtesting, and its counterparts, overdiagnosis and overtreatment.[4] This is, in part, a result of directly observing trainee's practice during external teaching visits, and also scrutinising their test-ordering behaviour using such educational tools as random case analysis and pathology inbox audits. It's as if some pathology tests (vitamin D, for example), bully their way onto the football team despite not knowing how to play. Even though the trainee, as manager, knows that they should be left on the bench, the rogue test invariably takes the (pathology test order form) field and commits numerous niggling fouls over the season before eventually kicking a spectacular own goal.

Knowing that inappropriate test ordering is expensive, problematic, and potentially harmful is one thing; changing behaviour to not throw in a random iron studies is another. This seems especially the case for GP trainees, who face something of a perfect storm when it comes to non-rational test ordering. Trainees usually enter general practice after exclusive hospital-based experience, a setting with a much greater focus on investigation and diagnostic clarity (think Hugh Laurie's misanthropic *Dr House*). Also, GP trainees, with their relative inexperience and unfamiliarity with managing undifferentiated illness, may be less tolerant of uncertainty.[5] This is further compounded by other factors in driving overtesting: the 'need to reassure the patient' and patient pressure to order tests. Lastly, trainees often encounter a more acutely unwell patient population than established GPs, leading to high rates of test ordering. It's a tough gig not to chuck in a thyroid function.

'Yes, it may be tough, but there a few practical tips to make test ordering more targeted,' I reassured the now restless audience. Be old-fashioned, and examine the patient. Be contemporary, and involve the patient in the decision to order tests. Manage the inevitable uncertainty by watchfully waiting and safety netting. Order tests sequentially as indicated, and avoid batch testing. Speak to someone who knows more than you do if you're stuck. Follow guidelines. And reflect on your practice.

As the room emptied, a trainee came up to me and asked *'But what about PSA screening?'* I said we should discuss it over coffee.

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