The case for case reporting

C Niek Van Dijk

Case reporting has gotten a bad name, largely because of 'evidence-based-medicine' (EBM). EBM puts case reports and technical notes right at the bottom of the EBM ladder: eminence-based (level V) versus evidence-based (level I) medicine. Level V evidence represents a sort of scientific low life. This is rather strange, as we shall see, but let's follow the argument.[1]

As the name suggests, EBM is about finding evidence and using that evidence to make clinical decisions. EBM seeks to make our diagnoses less 'subjective'. A cornerstone of EBM is the hierarchical system of classifying evidence. This hierarchy is known as the levels of evidence. Physicians are encouraged to find the highest level of evidence to answer clinical questions. Orthopaedic journals prefer to publish level I studies and systematic reviews in order to attract readers and to stimulate citations. As a consequence, with the introduction of the EBM movement, orthopaedic journals now publish fewer case reports. Many journals now refuse them, because case reports are not often cited and are supposed to have a negative influence on impact factor.

The argument is that EBM is an important instrument for guaranteeing quality in medical care: that this is how we all should work.

But do we really implement this for all our patients? I dare say that in daily practice we don't. For clinicians, it may seem that EBM is trying to devalue clinical judgement, intuition, practical experience and wisdom, which better fits into what we call real-world evidence.[2]

THE ART OF MEDICINE

There is something that we call 'the art of medicine'. Before explaining in detail what I mean, let's take an example away from our field. Imagine that your family has an old bronze, which you have had forever, or so it seems. Your grandfather found it in Egypt, ages ago. He always told you it was valuable, and he always said you could sell it if you got into trouble and needed some money. It was your 'safety net', he used to say. Well, now you do need some money, so it is time to sell your treasure.

As you approach an expensive looking New York gallery, you are suddenly feeling nervous. You are not sure how much you should ask and are out of your comfort zone. What if they try to cheat you? But there is an old man sitting behind the desk, and he looks reassuring, so you take a deep breath and push open the door.

But as the old man sees the bronze, he gently shakes his head. 'I am sorry', he says, 'but it is a modern copy, so it is not worth anything'.

You are shocked, and you say: 'But you have only glanced at it! How can you be so sure?'

> 'Oh', he replies, 'I have seen hundreds of them, both authentic and fake'.
> 'But that is not scientific!' you cry, 'It is just a subjective opinion. Aren't there any tests you can run? Isn't there any science?!'
> 'Oh yes', he replies, 'there are scientific tests, lots of them. And there are guidelines, and committees that make up rules. But you just can't beat experience, and I am trying to save you time and money. You could ask my son, of course, if you want a second opinion. He runs the business now. But he does not have my experience—he has not handled enough objects yet—so he is still making mistakes. But in ten years' time he will say exactly the same as me and be just as confident about it'.

Does this sound rather familiar? And isn't this how we also work? Just like that old antiquities dealer—who was a renowned authority in his own field—we carry a huge library of cases in our heads, and we consult that library—that database—whenever we meet a new patient. Every single case teaches us something, and the more cases we handle (or learn about), the more confident and safer we get. That is why the old man only needed to glance at our 'treasure' as we walked through his door. He could identify it, and know everything about it, from similar ones he had seen in the past.

Every time we meet a new patient, we use this internal database. We make a fast and efficient comparison with the hundreds or thousands of similar cases we have seen. But we do it impulsively, so don't realise how we are doing it. In fact, we only realise it when the answer pops into our heads and we get that familiar feeling of being absolutely sure. 'Ah yes', we say to ourselves, 'it's one of those, and it'll need this treatment, rather than that'.

And this is how we make our choices.

DARWIN

But if case reporting is so important, why does EBM give it such a hard time? Maybe this is why EBM is coming under pressure, because it seems to devalue real experience and simplifies what is actually a very complex process. 'The usefulness of evidence-based guidelines for medical practice is overestimated', concludes a report of the Royal Dutch Medical Society (KNMG). 'It is thin proof, obtained from trials with almost always white men between 40 and 60 years of age, who have only one disease'.

In medical practice, a distinction can be made between medical skills and medical art. Medical skills are regulated and defined by rules, regulations and EBM guidelines, whereas 'art' is not. In the outpatient department, objective knowledge is combined with the subjective truth. In our outpatient department, we combine wisdom and expertise with care, humanity and compassion, and this converts a mere medical professional into a human physician, who still makes the best decision even when there is insufficient evidence. The art of medicine can be described in terms of the ability to synthesise the clinical perspective, pattern recognition and intuition. A good physician is someone who can make his decisions explicit afterwards.

But sometimes a case is different. Sometimes the patient in front of you does not fit into the usual patterns. It is what we would call a diagnostic or therapeutic

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anomaly, a sort of puzzle, something we cannot entirely explain—or cannot explain using one of the current paradigms.

We all recall Darwin, whose voyage on *HMS Beagle* was a series of puzzling case reports. Perhaps the most famous case report ever is his report on the Galapagos finches, which suggested the solution and changed the world…

Is there a future for the clinical orthopaedic case report?

I certainly believe so!

The case report in orthopaedics is as necessary as ever for progress of our profession. A well-done case report serves a basic need, teaching us what is unknown and disclosing the unrecognised. The ultimate case report introduces a scientific novelty, whereas a level I study can only confirm what is already known. Case reports are the best source for new ideas, and new ideas are critical for the advancement of medicine, and almost always the case report carries an element of surprise.

A case report presents a clinical observation from daily practise. Case reports have proved beneficial in the recognition of new pathologies, rare diseases or unusual forms of common diseases. For example, the relationship between thalidomide and congenital deformities, the recognition of AIDS and the relation between Viagra and heart attack all started with case reporting. The calf squeeze test for Achilles tendon rupture (falsely attributed to Thompson[3] and the painful growth disturbance at the tibial tubercle (Osgood-Schlatter disease) were brought to our attention by case reporting.

Can case reports convince on their own? Of course they can. The description by Simmonds (and later repeated by Thompson) of the calf squeeze test for detection of an Achilles tendon rupture speaks for itself.[4] The description of suturing an acetabular labrum tear in a single patient does not need an randomised clinical trial to understand that there might be a role for such a procedure. The same goes for peroneal tendoscopy to detect a length rupture of the peroneal tendons. Our profession is full of case reporting and technical notes guiding us into new directions.

Case reports do not introduce evidence, but they are an excellent source of new ideas, novel solutions and intellectual advancement. The greatest challenge of a case report is that it should convince on its own. It should bring a general truth that can be stated in abstract scientific terms but nevertheless be based on a single observation.[5]

In every instance, someone has said to themselves: 'that was an interesting case, I ought to write it down, and share it, see what the others think'.

In the immortal words of William Osler, the first Professor of Medicine at Canada's Johns Hopkins Hospital, the founder of the Medical Service and hence a 'Father of Modern Medicine' (12 July 1849–29 December 1919): 'Always note and record the unusual…and publish it. Place it on permanent record as a short, concise note. Such communications are always of value'.[6]

But what makes a case report worth publishing? And how should it be written for publication in *JISAKOS*?

Remember that a good case report shows an anomaly. It suggests that something is wrong with the paradigm, something that needs to be corrected, and unless these anomalies are brought to light, there will be no more advance in medicine. It is as simple as that.

Therefore, a well-written case report should stand alone and be convincing. It may only be a single observation, but it should suggest something more, something larger, which can be stated in abstract terms.[5] For example, the first description by Watanabe in 1962 of an arthroscopic meniscectomy was so convincing that there has never been a randomised clinical trial to compare open versus arthroscopic meniscectomy.[7]

Most of us will rely on the maxim 'I will know it when I see it'—which is absolutely correct, of course, unless you're working by EBM rules—but few of us have formal training in the field. Our JISAKOS guidelines for case reporting and technical notes will guide you.

In summary, *JISAKOS wants* to publish cases that will stimulate discussion—and perhaps even dispute. Therefore, we invite you to submit your case reports—cases with clinical significance, whether diagnostic, or ethical, or therapeutic; cases that deal with decision making and management; cases that shed light on injury mechanisms; and above all, cases that show us something new or puzzling. We also welcome cases of medicine practised in unusual settings. We look forward to working with our authors to play a role in the advancement of orthopaedics.

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