The decision on how to treat a particular condition is sometimes very clear. For that particular condition e.g. a bacterial infection, there is a treatment e.g. specific antibiotic, that is simple, safe and effective in nearly every case.

In musculoskeletal (MSK) medicine, frequently it is not clear which is the best form of treatment. Let’s take tennis elbow as an example. Suggested treatments include anti-inflammatory medication, massage, strengthening, dry needling, corticosteroid or PRP injection, shock wave, surgery and probably a few others. How do I decide?

There are four main factors that I consider when I am deciding on a treatment.

The first is the evidence-based medicine (EBM). We live in an era of evidence in medicine. However for various reasons, MSK medicine is generally lacking in evidence for many conditions. This is partly because it is a relatively new specialty, and secondly because most research trials are funded by drug companies and involve their particular drug. There are minimal funding sources for non-pharmaceutical treatment trials. Anyone who has read Ben Goldacre’s book Big Pharma 1 would be somewhat disillusioned about the role of the big pharmaceutical companies in drug research anyway.

The volume of EBM in MSK medicine is slowly growing, but it is probably safe to say that it lags behind other branches of medicine. The other reason why EBM is lacking in musculoskeletal medicine is the difficulty of the research. No two injuries are identical so large numbers are required. There are also fewer objective measures such as blood tests. MSK medicine relies on pain (notoriously unreliable) and various markers of function (range of motion, strength etc.) as outcome measures. The quality of much of the evidence in MSK medicine while slowly improving is still relatively low. Good RCTs (Oxford Level 1) are rare and much of the evidence is case series (levels 3-4) or individual cases.

When dealing with high level athletes, sometimes it is not appropriate to make the same assumptions about their response to treatment as others. Some would argue that the elite athlete is a different physiological animal and therefore may respond differently to treatment. There will never be good research evidence for treatment of elite athletes as the concept of a blinded placebo trial will not be tolerated by the elite athlete who is desperate to return to his or her sport as soon as possible.

The second factor that I use is personal experience. Obviously the longer you practice, the more exposure you have to each condition and the broader is your experience in treating that condition. Ultimately you will have seen the more common conditions many times, treated them in various ways and you will know what works or does not work, in your hands anyway.

The third factor that influences how I treat someone is expert opinion. That can be in the form of a textbook, a review or opinion article, a lecture or conference presentation from an expert in the field, or simply discussion with learned colleagues. I am not shy in picking up the phone and calling a
colleague who is more experienced in managing a particular condition. Nowadays with email, messaging and skype it is nearly always possible to discuss with a colleague. Expert opinion is only Level 5 on the Oxford levels of evidence, but this does not diminish its importance.

The fourth and final factor is the patient’s choice. The degree of patient involvement varies considerably from case to case. In situations where there is a clear cut evidence-based expert opinion supported form of treatment then it is fair to firmly recommend the desired treatment. When the research is equivocal or non-existent and opinion divided, then it is reasonable to explain the different alternatives to the patient and invite their involvement in the decision making. Elite athletes in particular will often be quite knowledgeable about their particular condition due to their own or their colleagues’ past experiences, and may also have been exposed to various folklore treatments common in their particular sport. When their careers could be affected by the choice of treatment then it is certainly reasonable for them to be heavily involved in the choice.

In most situations we use a combination of these four factors to decide on a particular treatment. In the ideal situation there is strong evidence for a particular form of treatment, you have had good experience with that treatment yourself, the experts advocate this treatment and the patient is keen to go ahead. Unfortunately that ideal scenario is the exception rather than the norm.

We must also be aware of our own biases. This may be towards a treatment we enjoy doing (e.g. dry needling), it may be more highly remunerated (shockwave, injections, surgery) or one in which we have a research interest.

For those working with professional athletes and teams there will also be pressure from the athlete, coach, team owner etc to make a decision that maximises the chances of the athlete returning to play as soon as possible. Sometimes this is not actually in the patient’s best interests. This presents a difficult dilemma when the doctor is employed by the team, however it is imperative to remember that as physicians our first duty is to our patient.

This concept of four factors influencing clinical treatment decisions is not dissimilar to Sackett who states that “evidence-based practice is the integration of best research evidence with clinical expertise and patient values”.

REFERENCES

4. Kahneman D, Lovallo D, Sibony O. Before you make that big decision... Harv Bus Rev 2011;89(6):50-60