

EDITORIAL

[Translated article] What is fundamental and what is complementary in the skills of the orthopaedic surgeon



[Artículo traducido] Lo fundamental y lo complementario en las habilidades del cirujano ortopédico

A young patient, amateur athlete, attending the clinic frustrated due to persistent pain and instability in his ankle after a previous surgery. He was surprised that I made him walk barefoot in the consultation room (nobody had ever watched him walk with his cavovarus foot), he was surprised that I asked him for the disc so that I could look at the MRI images (nobody had looked at them, they had only read the radiologist's report), and he was even more surprised when I explained to him the possibility of using insoles for his peroneal tendinopathy instead of directly proposing rescue surgery. He put three MRI scans, a CT scan, an electromyogram, a SPECT-CT scan, an ultrasound scan and a baropodometry on my table. The radiologist's report was complete rupture of the anterior talofibular fascicle of the external lateral ligament and a medial osteochondral lesion, but did not mention that the chondral lesion had no oedema or signs of instability, nor did it mention the existence of a longitudinal rupture of the peroneus brevis and the presence of a peroneus quartus. The surgical report detailed an arthroscopic ligamentoplasty with growth factors and a resurfacing procedure of the osteochondral lesion, at a dizzying cost.

During my training as a resident and as a specialist my mentors and colleagues would often tell me "You have to operate on patients, not X-rays". New imaging technologies are very valuable and have taken our professional practice to another dimension. Automations, computerisations and, recently, artificial intelligence, can be good "complementary" tools to good professional practice. GPS in the car or on a phone takes us everywhere, but

we have become so dependent on it that we have lost or have failed to acquire the ability to drive with visual references. If we don't enter the address on the touch screen with haptics, we can no longer find our usual café. But we do know how many metres we will travel, the café's altitude, and whether it has 7 4-star reviews on the internet. Our residents and young specialists are getting great training in surgical skills and learning complex techniques, but in many cases they are not learning the fundamentals: why something hurts, how to assess the patient, what to ask (or not ask), how to interpret images, how to differentiate cause from consequence, primary pain from referred pain, and when to use the dazzling technique they have learned. Even if it means going back to the basics of our specialty, good practice tells us to explore first, to ask why things are happening, to decide if a "complementary" test is needed and to know which, before proposing a treatment. A "complementary" test can never be the only basis for a diagnosis and its findings as interpreted by a radiologist (who often does not receive sufficient information from us and cannot examine the patient) cannot be the basis for a surgical indication. Advances in super-specialised knowledge by functional units show us that we cannot be experts in all regions of our economy. My knowledge of the spine is basic, and my interpretation of an MRI is reduced to obvious findings, but any of my colleagues in the spine unit glean a large amount and quality of information from a lumbar spine MRI. It is very obviously the same with radiologists. A radiologist cannot be very good at everything if he has to report breast, heart, lung, pancreas, and ankle. Computerisation is strangling the information a radiologist receives and communication is being lost between radiologist and orthopaedic surgeon on what to look for and what is wrong with the patient before interpreting images.

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Artificial intelligence in radiology proposes intelligent algorithms to address these shortcomings based on huge amounts of information, processed in such a way that it flags up suspicions that must be "complementary" to our clinical suspicion. This past week I saw a young patient in consultation who, after casually twisting her ankle, was immobilised with an equinus splint for 4 weeks for a suspected posterior calcaneal tuberosity fracture. Attached to her emergency report was a picture of the little square showing the "irregularity" that the artificial intelligence had interpreted as a fracture. Neither the processor nor the resident considered that a young person would not break their calcaneus by twisting their ankle. Nor did they ask her about her surgical history of a calcaneal osteotomy for flat foot, whose "imprint" on the bone was interpreted as a fracture. With the swelling and the position of the foot in equinus for 4 weeks, the patient cannot perform the dorsiflexion necessary for normal walking. Because rehabilitation did not achieve improvement, she was forced to undergo surgery, the outcome of which could not be predicted. Taking what is complementary to be fundamental leads to serious problems for some patients, and for some doctors, and implies an enormous and avoidable expense for all.

It is obvious from my examples that I focus on the foot and ankle, but I am sure you will all have found parallels in your areas of work within orthopaedic surgery. It is our professional and ethical obligation to train new specialists and pass on our knowledge as we learned and learn from our mentors, teachers, and peers. Complementary tests are just that, complementary, and this is still good clinical and surgical practice. Surgical practice must always be contingent on a correct indication. And the indication necessarily depends on knowledge of the pathology and its pathomechanical basis. If we do not understand how something works, we can hardly understand how it has failed and how to repair it.

As a member of SECOT's Teaching and Continuing Education Committee, I am thinking of the younger members of our collective and as an addition to the many training courses on surgical skills and the many fewer courses on basic skills, allow me to remind you of some of the fundamentals of good orthopaedic practice. Many of these I learned from my mentors, others from my patients:

1. Listen to the patient. Look them in the eye, not at the computer screen. What is causing them pain is not always what appears in the "complementary" test report. Deformity is not always the reason for the consultation.
2. Take a good history to find out what is primary and what is secondary. The history can be your clue to the diagnosis. Being able to discriminate between referred pain and primary pain is one of the challenges in your professional life.
3. Ask yourself what is wrong, why it is wrong, and make a clinical diagnosis. It is not always necessary to ask for a complementary test, with a good diagnosis it is usually not necessary to ask for 4 tests at once.
4. If after taking a good history and examination you do not know what is wrong with the patient, pause and put your ego aside. Do not be afraid to tell a patient

that you do not know what is wrong. In this situation, don't ask for "complementary" tests if you have nothing to complement. Find a mentor, a veteran, and learn from them. The patient will always be grateful for your honesty and for the help in looking for someone more experienced who can solve their problem.

5. When the time comes for further testing, in complex cases, talk to your specialist radiologist and establish a relationship of trust. Tell them what you are looking for and where.
6. With few exceptions (tumours, infections), always think about exhausting conservative treatments before considering surgery. Some of the most grateful patients I have had are those who have been able to avoid surgery because conservative treatment has improved or solved their problem.
7. Learn and respect the natural progression to spontaneous healing of some pathologies. It makes no sense to operate on a proximal plantar fasciopathy with a 6-month history when most self-limit and stop hurting after 8-10 months.
8. If, on reading this editorial, you are convinced that you have not been surprised by anything and believe that everything should be considered, congratulations for being in the dynamic of good practice. I would like you to treat me if I were to have a problem.
9. If this editorial has made you think you have room for improvement, I am sure you will find the path to good practice.
10. If the editorial has left you indifferent and you think that the road to good practice is travelled from "complementary" test to "complementary" test, you have a problem and you should consider a change and a proper training plan. It is never too late to learn the basics.

In the age of artificial intelligence, of instant gratification, of visual and sound effects, of gigabytes of speed, it is not easy to change the dynamic towards the most valuable and irreplaceable resource in our profession and in our field of orthopaedic surgeons: our time to listen, explore, and explain to the patient. These resources are not in danger of extinction, but they are not being cultivated at the same rate as surgical skills. The "how to do it" has a thousand parents (Industry), the "how and why" is an orphan. At the Spanish Society of Orthopaedic Surgery and Traumatology we have introduced and will continue to introduce changes in teaching so that our questions change from "how to do it" to "how and why it happens" and "how to change it". The combination of both worlds - fundamentals and complements - will take us into the dimension of human and technical excellence that our patients look for from us.

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