MENTORS IN ORTHOPEDICS

MANUEL RIBAS

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SUMMARY

Manuel Ribas, director of the Orthopaedics Unit at Dexeus University Hospital, has dedicated his career to the advancement of hip preservation. Following international fellowships, Ribas introduced periacetabular osteotomy to Spain, bridging the gap between traditional arthroplasty and conservative joint-sparing techniques. His work emphasizes refined, minimally invasive approaches for femoroacetabular impingement. By integrating high-volume surgical efficiency with a commitment to specialized training, Ribas continues to shape the clinical standards for managing complex hip pathologies in younger, active patient populations.

We spoke with Manuel Ribas, who runs the Orthopaedics and Traumatology Unit at the Dexeus University hospital in Barcelona. Manuel is a student of Vilarrubias and has dedicated his career to femoral acetabular surgery.

What's the status of your hospital?

> It's a private hospital, and is part of the Quiron group, which has 17 hospitals in Spain. However, it's attached to a public university in Barcelona. It's a major hospital and the obstetrics and orthopaedics units used to be among the most well-reputed in Spain.

Do you publish often?

> Absolutely, which has been helped along by the fact that we were one of the first services in Spain to organise ourselves in a hyper-specialized way : hip surgery, hand surgery, shoulder surgery, etc...

Where did you do your orthopaedics training?

> In Barcelona, mostly under Mr. Vilarrubias. There was a lot of tough competition to get into his service, and during interviews I think that my language skills helped a lot. I speak fluent Italian as my grandmother is from Trieste, as well as English and German. I was part of the first generation of university hospital residents from 1983 until 1987. I was then lucky enough to be able to stay with Professor Vilarrubias who guided me towards a hip speciality. Thanks to him, I did four fellowships of one trimester each.

Where ?

> The first was in Hamburg with Professor Steinbrinck, in the septic orthopaedics department. Then I went to Dortmund with Professor Tönnis for pelvic osteotomies, then with Professor Katthagen. Next, for the reconstruction of the pelvis and femur during hip prosthesis revisions I went to Wayne Paproski at Rush University in Chicago. My final fellowship was at the Mayo Clinic

where I met Doctor Cabanela, Robert Trousdale and Dan Berry. They all gave me a great idea of what defined advanced hip surgery in the 90's.

What were your conclusions?

Let's just say that at the time I left for Germany and the States, we had quite a narrow vision of hip pathology, as the immediate surgical response to any pathology was replacement. It was a completely different approach to that of the knee, in which we can now delay the progression of arthritis and the use of prosthetics with meniscus surgery, ligament surgery or alinement correction using osteotomy. I thought that the conservative surgical culture that existed for the knee should also apply to the hip!

But there were those that took a more conservative approach...

That's true. My mentor, José Maria Vilarrubias, introduced Chiari osteotomies in Spain in the late 70's. We carried out a lot of Chiari osteotomies, often associated with femoral osteotomies which had good results. The Chiari osteotomy is often criticized as it only corrects the frontal plane, whereas in the case of dysplasia there is also a anteversion to consider. I was also very interested in the work of Reinhold Ganz in Berne who was a good friend of Vilarrubias. I went to Berne for a few days to observe his osteotomies, but Vilarrubias also requested that I do research into the results of the procedure in other hospitals before we tried it ourselves, as a university hospital like ours couldn't afford to risk its reputation by using an unconfirmed technique.

So, were you convinced?

Yes of course, I saw that the results were good, and I brought back the concept of femoral acetabular impingement, as well as how to diagnose and treat it. In 2003, my colleagues and I carried out the first ever periacetabular osteotomy in Spain. At first, we used the Smith Petersen approach, but in 2006 after further studies I carried out a minimally invasive procedure using the first window of Letournel's ilioinguinal approach.

Periacetabular osteotomies aren't common, have you done many of them?

I'm not sure exactly how many, but it must add up to at least a few hundred.

Are you happy with your results?

Absolutely, but the learning curve is steep. There are a lot of tricks to know and precautions to take. I do my cuts under fluoroscopic and neurological monitoring. The angle of the hip often needs to be greater than stated, around 80° or 90° to avoid irritation of the crural nerve. Precautions must also be taken with the ischion to protect the sciatic nerve which, as preoperatory neurological monitoring shows, can be irritated by the vibrations produced during an osteotomy.

Do you think that it's a procedure that anyone can do?

It's a tricky procedure that should really only be carried out by experienced surgeons, ideally surgeons who do them frequently, at least once a week. In my unit, I'm lucky to have Doctor Carlomago Cárdenas who has provided excellent support, and who's now very experienced in periacetabular surgery. He's also very well-reputed in hip arthroscopy.

What would be the ideal case for a periacetabular osteotomy?

> The ideal indication would be a woman in her 20's with well-preserved joint space. A periacetabular osteotomy allows you to do a very good quality correction. There's no limit to how good the result can be; it all depends on the surgeon's ability to plan the procedure, as no two iliac bones are alike. The osteotomy isn't actually the biggest part of the procedure, it's the reorientation.

And after reorientation, how do you fix?

> With three screws! Last year we carried out 48 periacetabular osteotomies: one every Wednesday. We called it the Wednesday operation.

Have you developed hip arthroscopy?

> Yes, my colleague Carlomagno Càrdenas in particular. The AEA, or Asociación Española de Artroscopia is very dynamic and has also taken a lot on interest in it. But I think that there is a problem with indication. Arthroscopies are often offered a little too late, once the lesions of the cartilage are too advanced. In such cases, an arthroscopy may help a little with mobility but not with the pain. Personally, I took an interest in it with the perspective of developing a minimally invasive hip procedure for impingements.

Meaning?

> In the beginning, surgical treatment of femoral acetabular impingements was very invasive. The procedure was carried out via trochanterotomy and hip dislocation. I remember having a conversation with Oliver Marin, a colleague from Madrid, in the Mayo Clinic in 2003, that really stuck in my memory. He said "Listen Manuel, that operation that Robert Trousdale calls the "Offset procedure", Ganz taught it to him and said that it causes arthritis in the short and medium term." I replied: "I've seen Ganz carry out that operation at the HIP Toulouse congress in 2002. A lot of the attendees, myself included, were puzzled by the results and the risk of avascular necrosis of the femoral head". Olivier said "Nonsense, I've seen patients experience great improvement after the procedure". And he was right, I saw it with my own eyes.
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> When I got back to Barcelona, Vilarrubias told me that I was supposed to be learning the PAO, not the "Offset Procedure", but that if it worked, he would allow me to perform it. The one condition being that I had to carry out cadaveric studies beforehand to find a less invasive approach, one that definitely didn't involve trochanterotomy. He added: "We cannot consider trochanterotomy in younger patients with the inherent risks of pseudarthrosis and limping." That's how I started developing the minimally invasive technique assisted by arthroscopy which is well-known today. In 2004, at a Ganz Tribute Meeting, I discovered that other colleagues such as Frédéric Laude from Paris had developed a similar technique to mine. But in spite of technical differences, our conclusions were all the same.

What do you think about short stems?

> I use a lot of short stems but of course, you have to consider a number of things such as femur bone quality and patient morphotype, as there are different models and no stem is the same. These differences can lead us to believe that we haven't yet found the ideal design. What is certain however, especially concerning younger patients, is that we've often used stems that were too long

in the past. In many cases we can avoid proximal stress-shielding by using short stems, which is also more compatible with bone preservation.

What's changed in hip replacement surgery over the past 30 years?

I think that in the 80's we used to put off full replacement for too long because of the issues we had with polyethylene implants. Today, not only are implants better, but patients have far higher expectations in terms of quality of life. Pain and activity restrictions are not acceptable, they don't want to be missing out on life. Athletes are even more demanding, which is why I introduced resurfacing in Spain. Our hospital is renowned for sports traumatology. However, resurfacing is only carried out on patients who accept our monitoring conditions: regular x-rays and blood metal testing. We do not allow them to restart training prematurely, and the first four months of physical therapy are closed chain only. After the first 4 months we evaluate the interface between the metal cup and the femoral head using scintigraphy. Normally fixation should be similar to that of the healthy side, if not the scintigraphy will show hyperfixation.

One of your favourite topics is the optimisation of operating theatres. How does your own hospital function?

My department is comprised of six operating theatres, 2 of which are dedicated to hip surgery. The first patients arrive at 7 am and are taken into the care of our anaesthetists while we discuss the final details of the case. Operations begin at 8am. We carry out fluoroscopic monitoring while closing and changeovers take around 30 minutes, which allows both of the hip theatres to treat 8 patients per day.

Do you do outpatient procedures?

Not for the hip ! Our patients are insured, so they can stay hospitalized for a few days, and they prefer to do so. Admittedly, there is very little demand for outpatient after a prosthesis in Spain compared to Germany or elsewhere. It's starting to develop in more "commercial" structures. Fast-track procedures came into being in the US for financial reasons, but the Americans have a completely different model to ours. I remember when I was at the Mayo Clinic with Cabanela, we would go to see patients at the Methodist hospital for a few days, then move on to somewhere else. I think that in the current European model, staying in hospital for a few days is the best way to avoid complications after surgery.

What does an orthopaedic surgeon typically earn in a small public hospital in Spain?

A surgeon's salary would be around 2500 to 3000 euros maximum. They would typically be in the emergency department in the morning and then go to work in private clinics in the afternoons to earn more money.

Do you have many foreign surgeons working in Spain?

Yes, lots! Especially from South America: Argentina and Venezuela. They work in both private and public hospitals: in our hospital for example, we have three foreign specialists working in our emergency department. The post-war baby boomers are now retiring, which is going to leave a big gap in our profession that will have to be filled.