

Complexities of treating younger patients with early arthritis

Interview with **Mr Fahad Attar** about his job as orthopaedic surgeon, surgical techniques and the future of customised implants



Mr Fahad Attar is a trauma and orthopaedic consultant at St Helens and Knowsley Teaching Hospitals (Merseyside), The BMI Alexandra Hospital (Cheadle) and Spire Cheshire Hospital (Warrington) specialising in hip and knee arthroplasty and knee reconstruction surgery. His regular surgeries include total and partial knee arthroplasty, patello-femoral replacement, ACL/PCL reconstruction and multi-ligament reconstruction. He also treats patients with early-stage arthritis and isolated cartilage defects with joint-preserving surgeries such as osteotomies around the knee, microfracture, mosaicplasty and knee resurfacing procedures. Attar is experienced in the field of managing younger patients with early degenerative changes or cartilage lesions, who have failed a few other arthroscopic procedures or who are suitable candidates for a resurfacing operation rather than a joint replacement operation.

What challenges do you face in your practice?

I usually see younger patients with knee arthritis or non-specific knee pain. The days that only middle-aged or older patients with arthritis presented, to be treated with a fixed set of treatment options, are long gone. We are now seeing similar pathologies, such as cartilage defects, arthritis or non-specific knee pain in younger patients as well. I think that one of the main reasons for this is that more people are involved in sports and have sustained sporting injuries in the past. They

might already have undergone some surgical procedures such as a partial meniscectomy with parts of the cartilage removed or have had a ligament operation done previously. Invariably, when they have these initial injuries, they normally tend to sustain more problems with their knees over time. They have early wear and tear, secondary to partial meniscectomies and cartilage defects which can then progress, deteriorate and lead to arthritis.

We are beginning to see a cohort of these patients in their late twenties, early thirties or even early forties who are presenting with quite complex scenarios of early arthritis and cartilage lesions. This group is very difficult to treat. Had they been older, we would offer a partial or total knee replacement but since they are so young, we try to preserve the joint as long as possible to avoid any future revision procedures. Hence managing these patients is a little bit tricky; as we have to address their pain while maintaining an improved functional level. If you can catch these young patients early, you have the opportunity to really hone in on the problem and provide some joint preservation procedures.

What are the main complexities within funding pathways?

It is always a problem because you want to choose the most appropriate treatment for a patient, which involves selecting the most suitable implant. You always run into funding issues with regards to the implant or the procedure being too expensive and some hospitals are not willing to take those on board. It is somewhat easier in the private sector.

The implant and procedural costs are an important factor in the NHS when deciding which treatment option you are going to follow. Another factor to consider is that some procedures, especially the innovative ones which are coming through, do not have appropriate coding for the complexity of the operation itself. Routine operations have set codes that are regularly used; however, patient-specific treatments and management options, such as knee resurfacing, do not classically fit into these available codes. This can sometimes hinder you because coding it to the nearest operation might not get you enough funding to cover both the procedure and

the implant cost – as you would ideally like it to. We are trying to overcome this.

The crucial thing is to ensure you can offer the right operation with the most suitable implant to the patient while addressing the costing issue at the same time. This is especially the case when treating patients with early arthritis as a knee replacement may not always be the best option.

How do you address the problem of new treatments/implants not being present in the current coding? Is it a bottom-up or top-down approach?

I think it is a bottom-up approach. As more people start using these implants, a new appropriate code needs to be generated, taking into account the complexity of the case, as well as the cost of making the implant which requires MRI scans/CT scans of the patient anatomy.

All this has a cost implication. We need to offset it against what the cost would be if you would perform e.g. a knee replacement, whereas a knee resurfacing would be more suitable. If a knee resurfacing procedure fails in 12–15 years, the next option would be a knee replacement; however, if a knee replacement fails in 15–17 years, the next option is a revision knee replacement, a much more invasive procedure with huge cost implications, not just to the hospital but also to the society and the patients. So when you consider all those things, it is essential to start generating codes for procedures which are more relevant. If more surgeons start performing these procedures, there will be a big push to build these codes.

When coding them in my practice, I sit down with the coders and put in all co-morbidities and complexities. I add what we do specifically in the operation, break it down and try to come up with a code and a tariff that closely matches the implant cost, the investigation cost and the operation costs. As long as that matches up, we are fine. The problem is when you start losing money, the hospitals and trusts shy away from the procedure.

Coding is a big factor but it is changing. In the last couple of years I have seen new codes being generated. An example is meniscal transplant surgery, a joint preservation option, which is something that wasn't there seven or eight years ago.

How do you perceive innovation within orthopaedics?

There is definitely a need for innovation, for the simple reason we are seeing a different cohort of patients. The pathology is more complex and we need to start focusing on a treatment that needs to be tailor-made for a specific patient, rather than a patient fitting into a treatment option. If you are going to do that, you need to have options and implants available that are going to be used for that specific patient. Therefore innovation is vitally important because it gives you these option and tools, which are tailor-made to suit a single patient.

Fundamentally, each patient's activity levels, pathology and expectations may all be different. All these issues need to be addressed when coming up with a suitable management plan. Innovation enables you to provide suitable treatment options and relevant implants, in managing these patients.

Are customised implants the future?

I believe so. The advantage is that they are tailor-made to the pathology of the specific patient. Normally, the routine implants we use have set sizes, whether for knee replacement surgery or knee resurfacing surgery. Invariably, surgeons have to compromise somewhat during the procedure; when the implant size is slightly too big, you sometimes may have to accept that; if, on the other hand, it is too small, you may have to reconsider and resize. There are no in-between sizes and that is always a problem because this can cause post-operative problems, such as pain and soft tissue impingement.

With regards to cartilage procedures where you use knee resurfacing implants, even if they come in two to three sizes, they might be bigger than the actual cartilage defect. If that is the case, you have to sacrifice healthy cartilage by removing more to fit the implant into the area. If the implant is too small, it will not replace the complete cartilage defect and is not suitable. In some areas of the knee, especially around the trochlea, you cannot fit standard size implants because of the specific patient anatomy. You are compromising on the whole joint surface if you try to fit a standard size implant. It may affect mobility, and cause pain, impingement and further knee problems, as the knee cap will not track well. The advantage of customised implants is that they address a wide array of issues by conforming to the patient's pathology and anatomy. For the trochlear area, the implant will follow the curves and form a smooth transition. This will avoid impingements, overhangs and post-operative knee problems.

Similarly with customised knee replacement implants, these actually fit to size so you do not have any overhang and you do not have to compromise on sizes, avoiding soft tissue problems, impingements, and post-operative problems.

Any final comments on life as an orthopaedic surgeon?

If I talk more about my sub-specialist area and interest which is mainly hips and knees, we are seeing a lot more complex issues and a lot more younger patients. I think we will be progressing for the next five to ten years towards trying to tailor patient management to specific patient pathologies. Customised implants will be a big step towards addressing this, because I do not see anything else on the horizon apart from bespoke implants which can bridge the gap sufficiently. Long-term data is needed for these patient-specific implants which should include implant survivorship, follow-up data on pain levels and general function scores. When this information becomes available, more surgeons will start incorporating them into their practice.