Will Granny Be Able to Get Her Rotator Cuff Repaired?

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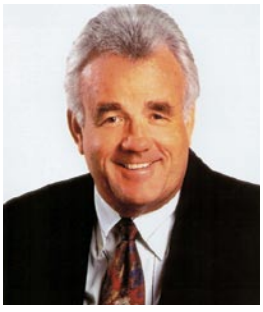
Throughout the published history of rotator cuff tears and their repair, the major focus has been on the technical aspects. We have witnessed the evolution of open to arthroscopic repair, allograft to xenograft, and single- to double-row. Some of these advancements have been shown to make a difference, while others remain equivocal. In spite of the advancements in our surgical technique, our results do not reflect the biological outcomes that we would like to see. We have spent decades on suture constructs and patterns as well as endless knot-tying exercises and knotless anchors and not enough on biology. Technology is supposed to advance logarithmically and exponentially and yet we have plateaued.



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Fortunately, clinical outcomes in terms of pain relief and functional improvement have outpaced our biological repair outcomes. A great deal of research has been published on the pathology and the process of biological repair in rotator cuff disease over the past 10 to 15 years. There exists a substantial amount of controversy even today about the contribution of vascularity, mitogenic factors, collagen, and extra cellular matrix molecules to the repair process. In spite of some general disagreement on some of these issues, there is a consensus that they each play an important role. While we recognize the value of many of these factors, we have lacked the ability to harness these resources and practically apply them to our repair procedures.

We have two pathways to choose from. One will take us down a very expensive road where we will employ exogenous sources of stimulation and repair such as xenografts, bone morphogenetic proteins, and other growth factors. The other path will center around the biological stimulation of repair, centering on harnessing, enhancing, and stimulating the patient's own reparative potential. This may be done through relatively inexpensive techniques such as ultrasound, radio frequency (RF), platelet-rich plasma, impregnated sutures, shock wave therapy, and a variety of other novel ideas and techniques. These techniques have the obvious advantage of delivering cost-effective innovation rather than the more expensive exogenous sources.

Can we prevent this ubiquitous disease that is so prevalent and often so debilitating? Would early intervention with any modality prevent tendon disruption? If any of these techniques could be shown to be feasible, there would have to be exhaustive outcome-based level 1 evidence, which could take decades. Will the medical device industry or major pharmaceutical firms invest the time and resources in innovation when the question of reimbursement is unanswered?

There will continue to be significant financial constraints on reimbursement such as the untenable discrepancy between the hospital and ambulatory surgical center (ASC) reimbursements for a Medicare patient needing a rotator cuff repair. With these inexcusable inconsistencies, some procedures will be profitable and others not, and this will eventually dictate care. The Food and Drug Administration, Centers for Medicare & Medicaid Services (CMS), and third-party payors will continue to wield ever-increasing power over our care and treatment of patients. I am not sure that 5 to 10 years from now we will be able to preauthorize a rotator cuff repair in an active 80-year-old golfer!

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Dr. Tasto wishes to note that he has an equity position and holds patents for products with ArthroCare and Smith & Nephew. He also notes that he is a paid consultant to and serves in other capacities with ArthroCare and Smith & Nephew.

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