Augmented Reality-Based Navigation System for Wrist Arthroscopy: Feasibility

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It was with great interest that we read Zemirline et al. article¹ “Augmented Reality-Based Navigation System for Wrist Arthroscopy: Feasibility” in JWS 2.4 (Nov. 2013). In this article, the authors outline many possible advantages of a reality-based navigation system for wrist arthroscopy. We entirely agree with the authors’ experimental setup. It is well known that wrist arthroscopy shows significant inter- and intraobserver differences.^{2,3} A well-designed navigation system might reduce the latter.

A correct diagnosis of TFCC lesions depends on the exact site of the tear.⁴ A precise three-dimensional orientation is very important during suture placement to repair TFCC pathologies effectively.⁵ The calibration procedure with multiple steps is supposed to be the decisive and, at the same time, the critical phase which may reduce the reliability of the device. Economical factors may hinder a widespread acceptance since equipment costs, maintenance, and especially a prolonged operating time are supposedly drawbacks of this innovation. Otherwise, a shortened learning curve can compensate for the latter.

All in all, this concept appears to be promising. Zimmerline et al.¹ clearly illustrated the possible advantages of an augmented reality-based navigation system for wrist arthroscopy

in vitro. Now, further studies should be planned to proof these advantages under clinical circumstances.

References

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