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Letter to the Editor

## Letter Regarding Comparison of Orthosis Management Failure Rates for Mallet Injuries



To the Editor:

I read the article “Comparison of orthosis management failure rates for mallet injuries” by Brush et al,<sup>1</sup> in which the authors compared orthosis management failure rates for mallet injuries, with interest. This study examined a relevant clinical question for a common injury that can be treated successfully and with relative ease, when appropriately done.

The authors stated in their conclusion that “statistically significant risk factors for failure are increasing age, a tendinous injury, and the orthotic type.”<sup>1</sup> However, as only *P* values were reported, the precision of this effect remains unclear and is difficult to interpret. Multiple confounders were taken into account and I question whether the authors took hand therapy treatment as a possible confounder into consideration when they analyzed splint type and failures.

In terms of risk failures reported by Brush et al,<sup>1</sup> “The patients in this study were seen by 55 different providers which among surgeons, physician assistants, and certified hand therapists. Soft casts and thermoplastic orthoses were applied by physical therapists, while Stack, alumafoam, and other orthoses were applied by a variety of trained and certified providers. Failure was highest in patients treated with Stack orthoses (57%), followed by alumafoam (42%), soft cast (28%), custom thermoplastic (26%), and unspecified (3%) orthoses.” Based on my clinical experience, the greatest risk of failure arises when the orthosis is abruptly removed after the immobilization period and patients are allowed to use the hand

immediately in all daily activities. A hand therapist can guide patients to gradually wean off the orthosis and increase distal interphalangeal flexion every week. This gives the scar tissue time to remodel and adapt to increasing flexion.<sup>2</sup>

The authors did not describe whether the “physical therapists” or “certified hand therapists,” who were responsible for applying the soft casts and thermoplastic orthoses in their study, also advised and coached the patients on gradual orthosis withdrawal and exercises after the initial immobilization period. Assuming this was the case, this makes hand therapy a confounding factor that led to a biased conclusion due to the lower risk of failure for the immobilization type they applied; therefore, it would be appropriate to correct for this in their analysis.

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