

Effectiveness of Using Proheal-Wrapped Nasopore for Nasal Bone Fracture Surgery

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Introduction

In nasal bone fracture surgery, the post-operative packing material can be divided into conventional materials, such as Vaseline gauze that requires removal, and absorbable materials that is totally degraded and does not require removal. Nasopore, a biodegradable synthetic polyurethane foam, is the material mainly used as nasal dressing in our institution. Although it has no need for post-operative removal and is easy to handle, it is soft and hydrates quickly, making it difficult to provide sufficient support to maintain the post-reduction status. The aim of this study is to introduce a novel method to improve durability of Nasopore with Proheal(Fig.1).

Materials and Methods

Instead of packing Nasopore directly into the nasal cavity, we wrapped Nasopore with Proheal, which is a collagen wound dressing material. After reduction of the nasal bone, nasal cavity was packed with nasopore wrapped with proheal(Fig.2), while the non-fractured nasal cavity was packed with proheal rolled up only(Fig.3).

Results

As Proheal help delay the hydration of Nasopore, it improves supportability and maintenance of Nasopore(Fig.4). Additionally, nasal mucosal healing was observed to be faster, indicating a potential positive impact of proheal on the healing process.

Conclusion

The proheal-wrapped nasopore provided sustained support and exhibited a longer-lasting property compared to nasopore alone. Moreover, it contributed to faster nasal mucosal healing. These findings suggest that the application of proheal-wrapped nasopore could be a superior choice in nasal bone fracture surgery, as it offers improved stability and facilitates a quicker recovery. Considering proheal-wrapped nasopore may lead to enhanced surgical outcomes and improved patient recovery.

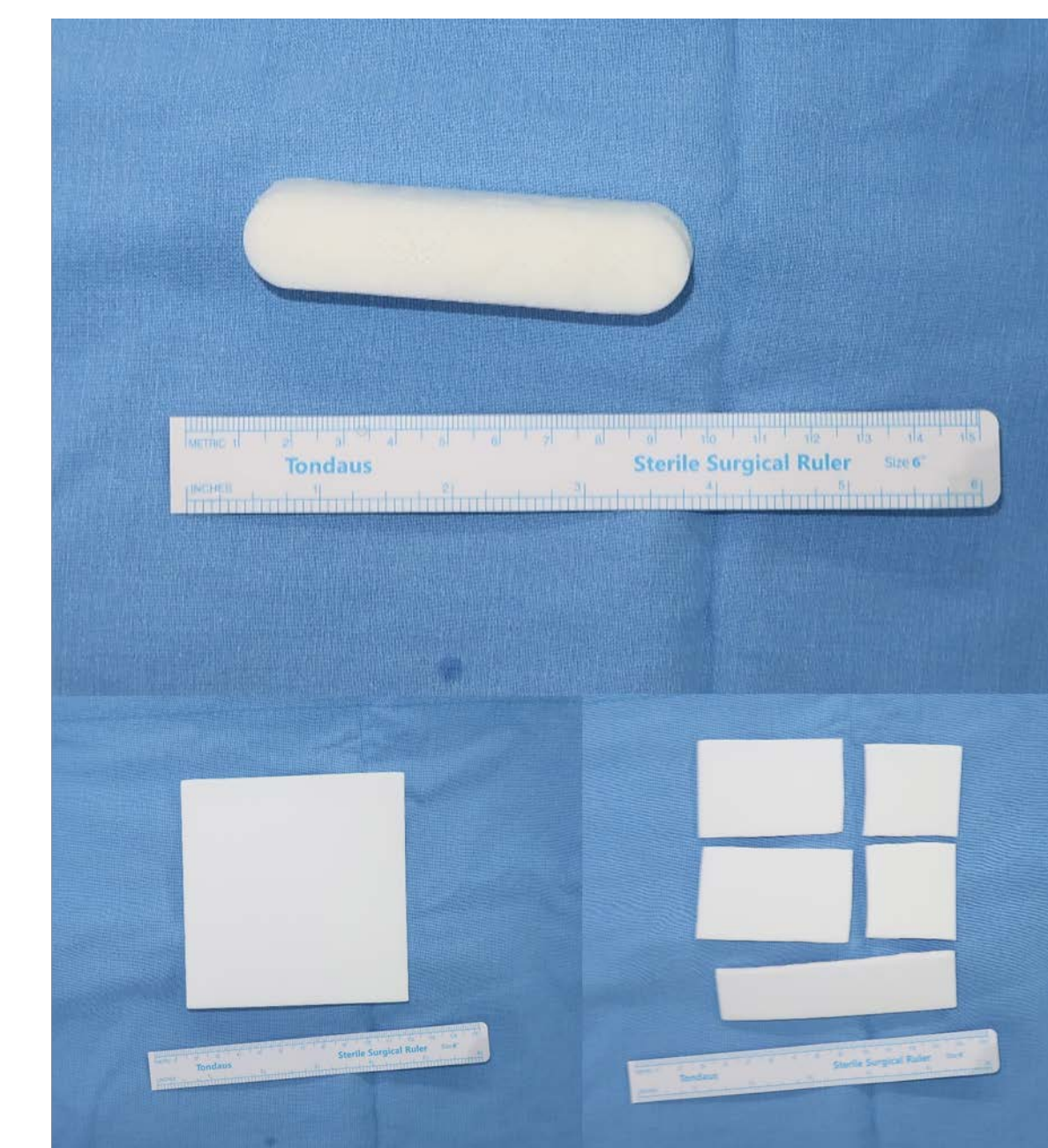


Fig.1 Nasopore and Proheal(left, right)

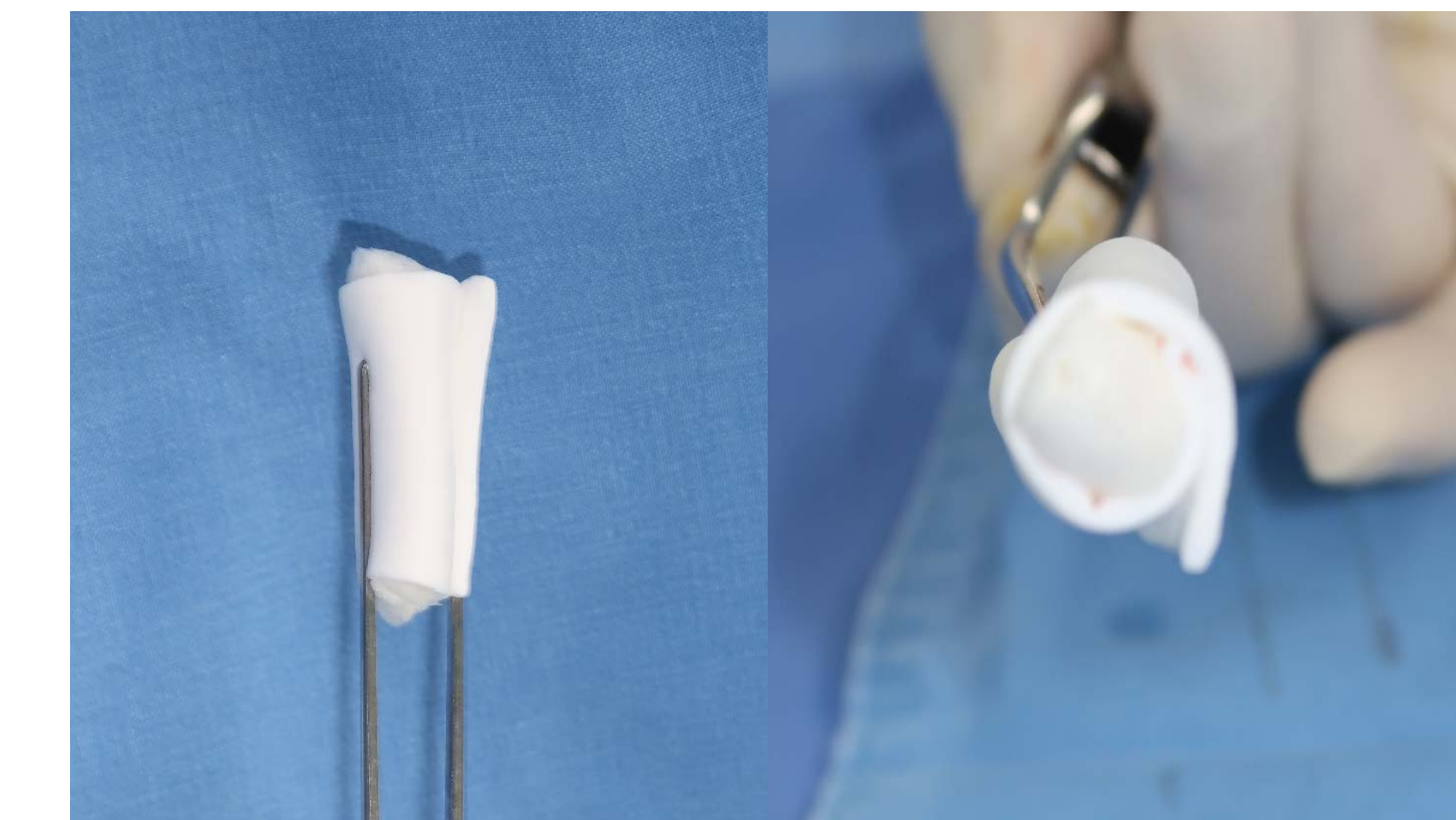


Fig.2 Proheal-wrapped Nasopore



Fig.3 Rolled-up Proheal

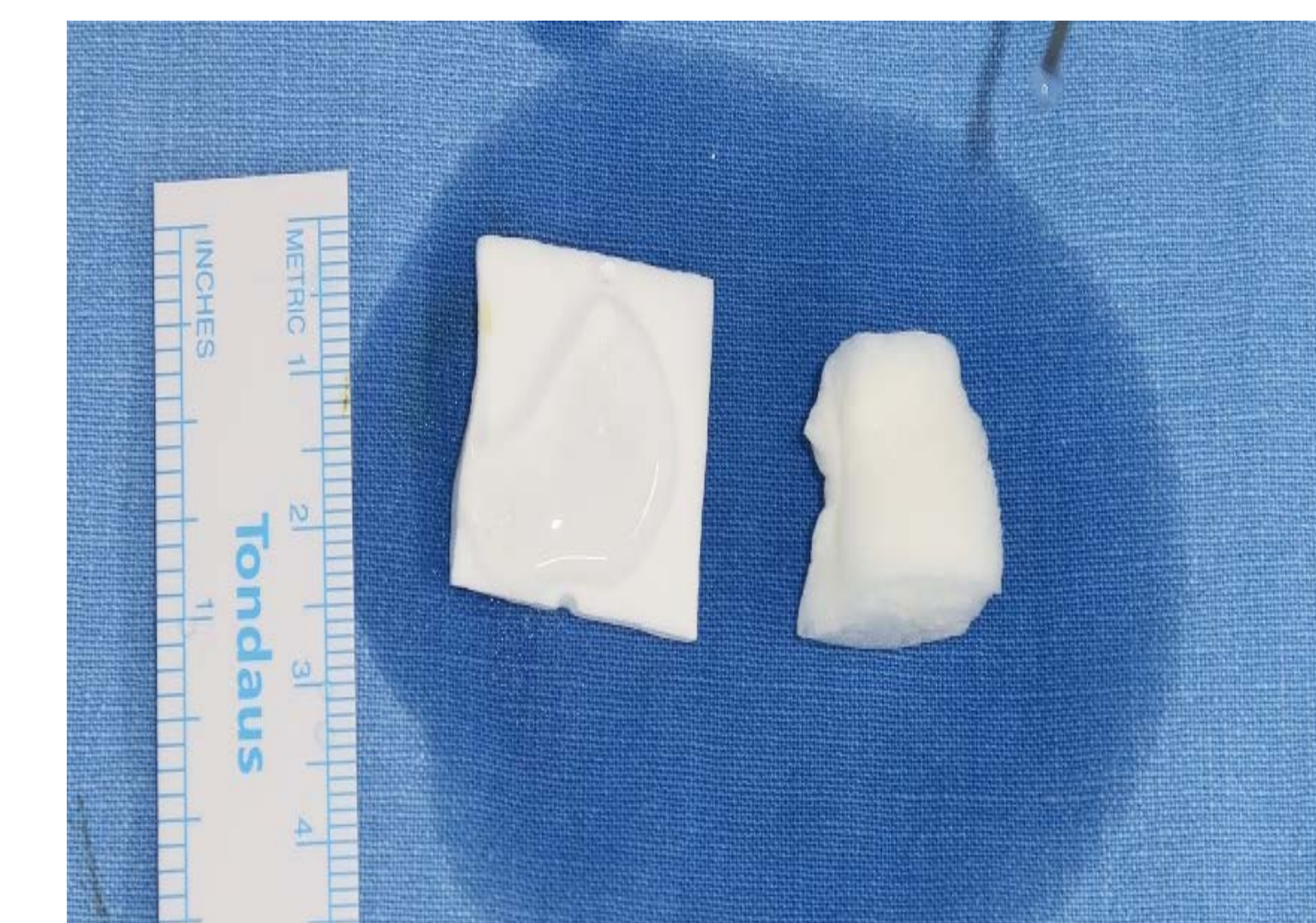


Fig.4 Proheal retained the water droplets more than Nasopore