

# Micronized porcine urinary bladder matrix for management of recurrent pilonidal disease: a retrospective case series

Biruk T. Almaz, MD, FACS<sup>1</sup>, Timothy H. Dawson, MD<sup>2</sup>, Claire E. Witherel, PhD<sup>3</sup>



<sup>1</sup> Baptist Health Medical Group Colorectal Surgery New Albany, IN  
<sup>2</sup> Baptist Health Medical Group General Surgery New Albany, IN  
<sup>3</sup> Integra LifeSciences Corporation Princeton, NJ

## INTRODUCTION

Pilonidal disease affects over 70,000 people each year and commonly recurs following an initial surgical or conservative intervention. Recurrent cases are often managed with a deep and wide surgical excision—an approach associated with substantial postoperative downtime, prolonged wound care, delayed return to normal activities, and higher risk for complications. The Gips procedure that includes using trephines to core out mid-line pores and infected tracts offers a minimally invasive alternative. However, optimal strategies to support wound healing and reduce recurrence with this approach continue to evolve. Micronized porcine urinary bladder matrix (UBM) has been shown to support the management of complex and surgical wounds including those with tunneling and undermining aspects (Figure 1).

## OBJECTIVE

Investigate the efficacy of micronized urinary bladder matrix to support management of recurrent pilonidal disease following the Gips procedure compared to standard of care using a retrospective chart review.



Figure 1. Micronized urinary bladder matrix (UBM) (MicroMatrix and MicroMatrix Flex, respectively) Integra LifeSciences Corporation, Princeton, NJ

## METHODS

A pilot retrospective case review was performed from December 2024 until December 2025 with patients presenting with recurrent pilonidal disease treated with or without UBM. A total of 15 patients were included in the review; n=8 who received standard of care and n=4 patients who received the UBM technology. All patients underwent the Gips procedure in the ambulatory surgery center; wounds were treated with methylene blue to aid in sufficient excision and resultant wounds were treated with either a standard closure and wet-to-dry dressing protocol or the application of the micronized UBM placed within the cavities followed by standard closure and dressing protocol. Patient demographics and time to closure were evaluated. Statistical analysis between groups was performed with an unpaired t-test with a Welch's correction, p-values <0.05 are considered significant.

## RESULTS

Approach	Sex	Age	BMI	Time to Closure (days)
Standard of Care	F	18	50.1	89
	M	18	45.1	39
	M	28	26.3	74
	F	19	27.37	32
	F	14	32	45
	F	18	24.7	153
	M	18	22.78	183
UBM	F	18	34.5	52
	F	28	43.7	39
	M	28	37.6	24
	M	26	51.1	10
M	18	27.12	15	

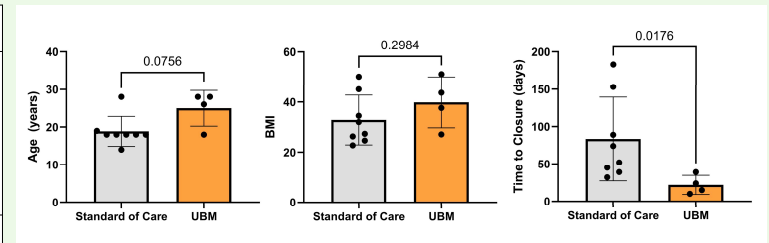


Figure 2. Patient demographic information (age, sex, BMI) were not different between groups. Time to closure for the UBM group was significantly lower compared to the standard of care.



Figure 3. Representative patient from UBM group. Initial presentation, two weeks post-op, four weeks post-op, and a 16 week follow up.

## DISCUSSION

Patient demographics between the standard of care and UBM group did not differ. However, time to closure was significantly faster in the UBM group compared to standard of care (Figure 2). Representative patient image for the UBM group illustrates definitive closure was reached by the four-week post-operative follow up, with very favorable cosmesis outcomes at the 16-week follow up (Figure 3).

## CONCLUSION

Adjunctive use of micronized UBM with the minimally invasive Gips procedure may offer a promising, same-day surgery treatment option for recurrent pilonidal disease, supporting functional recovery and eliminating the prolonged wound care burden associated with wide excision. These preliminary findings support further evaluation in larger cohorts to assess long-term efficacy and broader applicability.

## References

1. Di Castro et al. 2016 *Int'l J of Surgery*
2. Vaierio et al. 2015 *Regen Med*
3. Behrens et al. 2018 *PRS Global Open*
4. Cotler et al. 2023 *Wounds*

Disclosure:  
BTA is a consultant for Integra LifeSciences