

# Management of a Complex Excoriation Disorder–induced Wound with a Viable Cryopreserved Placental Membrane

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**Summary:** Excoriation disorder (ED), also known as dermatotillomania, is a condition characterized by repeated “skin picking” that leads to the formation of skin lesions. Because of the similarity of its symptoms to obsessive compulsive disorder, ED is classified as a subcategory of obsessive compulsive disorder by Diagnostic and Statistical Manual of Mental Disorders Fifth Edition. Although the majority of the self-inflicted wounds are not clinically significant, many wounds lead to social and occupational dysfunction by becoming infected, chronic, and life threatening. This report describes the successful use of a viable intact cryopreserved human amniotic membrane in conjunction with selective serotonin re-uptake inhibitors in treating an ED patient who presented with a large calvarial wound of 3-year duration that had failed previous extensive medical and surgical interventions. (*Plast Reconstr Surg Glob Open* 2016;4:e1132; doi: 10.1097/GOX.0000000000001132; Published online 7 December 2016.)

According to the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition, the diagnosis of excoriation disorder (ED) requires that a patient must make repeated attempts to stop skin picking, and the symptoms may not be explained by symptoms of another mental disorder.<sup>1</sup> In addition, it has been found that there are elevated rates of this disorder with patients who have obsessive compulsive disorder (OCD) or first-degree relatives with OCD.<sup>2</sup> Thus, because of the similarity to OCD, this disorder is characterized as a subcategory of OCD in the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition.<sup>1</sup>

The onset of this condition usually develops during adolescence because of the presence of a dermatological condition, yet it can also begin at any age.<sup>3,4</sup> A prevalence of 2% to 4% of the population demonstrates skin picking.<sup>3</sup> A study found that 62.7% of a randomized group intentionally picked their skin at some point in the study, whereas 17.6% of them had clinically significant self-inflicted wounds.<sup>5</sup> To manage skin picking, patients can be put on selective serotonin re-uptake inhibitors (SSRIs). SSRIs help decrease

the skin-picking behavior and reduce the size of skin lesions.<sup>6</sup> Although most self-inflicted wounds are minor, some wounds can become infected and life threatening.<sup>7</sup>

A clear guideline for treatment of patients with severe wounds that have this condition is lacking. Unfortunately, patients with this disorder are poor surgical candidates as the donor sites of grafts and flaps, as well as the closed wound itself, could be problematic.<sup>8</sup> Alternative treatments are necessary to help those individuals. Surgically, this patient population is considered moderate and of high risk, even with appropriate pharmacologic treatment. Not only is the primary site of injury at risk but also are the donor sites of the flaps and grafts used to reconstruct these defects. In addition, even after definitive closure, reinjury can be problematic.

Treatments that can minimize the risk of further morbidity and minimize the need for hospitalization while maximizing patient compliance are lacking. We present the use of a viable intact cryopreserved human placental membrane (vCPM; Grafix, Osiris Therapeutics Inc.; Columbia, Md.) to assist with closure of a large scalp wound, without the need for donor sites or hospitalization.

## CASE PRESENTATION

A 53-year-old man with a left temporal wound, who was originally diagnosed with folliculitis and treated by his dermatologist for over 2½ years, was referred for failure to heal after 3 years of treatment. Multiple biopsies and cultures had been taken previously, with no defini-

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tive diagnosis other than severe folliculitis. The superior portion of the wound presented with exposed calvaria lacking periosteum and fibrotic temporal fascia. The patient was treated with Integra (Integra Lifesciences Corporation, Plainsboro, N.J.) and subsequent split thickness skin autografting. The patient suffered 100% graft loss.

A second split thickness skin autograft was placed, which had 100% take at the 2-week follow-up visit. Between the 2- and 4-week postop visits, the patient peeled the healed graft off of his own head and picked deeply into the granulated wound (Fig. 1A). He was diagnosed with ED by his plastic surgeon and referred to psychiatry where he was placed on escitalopram, an SSRI.

As an alternative to skin grafting, vCPM was used to treat the wound in the outpatient setting without the need for sedation. Adaptic (Acelity Companies, San Antonio, Tex.), gauze, and a protective foam covering were used as dressings. Complete granulation and improved skin edges were noted 6 days after the initial placement (Fig. 1B). In addition, the exposed calvaria was covered completely with healthy granulation tissue. The patient subjectively noted a decreased feeling of itchiness in the periwound area, after the first application. With the exception of a few scheduling difficulties, the patient was treated weekly with vCPM. Over the

course of treatment, the wound consistently decreased in size, with the exception of when he obviously picked at his wound (Fig. 1C). The picking slowed the healing process, yet over the course of 17 applications, over 24 weeks, the wound fully healed. The patient presented for a follow-up visit 1 year after initial closure of the wound. The area demonstrated significant scar maturation with favorable cosmesis (Fig. 1D).

## DISCUSSION

In the case of this patient, the use of vCPM proved to be an excellent method to treat a chronic wound in a poor surgical candidate. This procedure is applied in the office and offers a noninvasive treatment without the morbidity of a donor site. The healing process for this patient was slowed because of recurrent wound picking. Upon evaluation of the percentage reduction between applications, we note that he had dramatic reduction in the surface area when he did not touch the wound between treatments. In addition, after sharp debridement, we noted a significant reduction in wound size between treatments although this was anecdotal and confounded by his skin picking.

During the 24-week treatment, there were 4 incidences where the wound enlarged. On average, the



**Fig. 1.** Treatment progress. A, Baseline wound presentation. B, One week after first vCPM application. C, Wound progression after 6 vCPM applications. D, Scar maturation and cosmesis 52 weeks after initial wound closure.

wound surface area decreased by approximately 27.23% between treatments, excluding the weeks that he admitted to touching his wound. In addition, between the fourth and the fifth treatment, there is a large decrease in size. This was due to a 3-week gap between treatments and the patient not picking at his wound during that time.

### CONCLUSIONS

vCPM is a safe and effective modality in the treatment of complex wounds. It should be considered in patients who present with ED as it reduces the morbidity of donor sites. In addition, it can be performed in an outpatient clinic without the need for anesthesia, hospitalization, and restraint. Far fewer applications would have been necessary for this patient had he not had ED.

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