Fish-Skin Grafts Heal Complex Wounds

By Christopher L. Winters, DPM

Podiatrists are successfully treating their patients with a gift from the sea—specifically **Kerecis Omega3 fish-skin grafts.**

For example, **Ian Barron, DPM** (Clintonville Foot and Ankle Group in Columbus, Ohio) and **Brittany Wojnicki, DPM** (Horizon Health in Paris, Illinois) are treating complex foot and ankle ulcerations with Kerecis products.

One of Dr. Barron's patients, a 70-year-old woman, had a serious necrotizing infection, which required an emergency fourth and fifth ray amputation. She lost a lot of soft tissue, and the deep wound had a lot of tunneling. This diabetic patient was at risk of a below-the-knee amputation, which the doctor believed would dramatically shorten her life.

As Dr. Barron explained, "We didn't have a lot of options. She wasn't healthy and, for various reasons, wasn't a good candidate for other treatments like a wound vac or split thickness skin graft."

The doctor initially treated the patient with Kerecis Omega3 OR. When Kerecis Omega3 MicroGraft became available last June, he used it to fill the depth and tunneling. Dr. Barron then covered the wound with the OR graft to "seal" the MicroGraft in place and to form a bacterial barrier. He also covered an exposed third metatarsal head with the OR graft.

The first application was on December 10, 2020, and incorporation began almost immediately. Within the first week, the doctor noticed granulation tissue forming and starting to cover the base of the wound. The wound, which initially measured 9.5cm by 6.2cm, was about half that size in less than six weeks and totally healed within 10 weeks.

To complicate the issue, the patient developed a pressure wound on the opposite foot during the post-op period. The doctor treated this second deep wound with the same combination therapy—MicroGraft and OR. The wounds on both feet have healed. The patient has been saved from an amputation and is in physical therapy.

Dr. Ian Barron treated a serious wound with the new Kerecis Omega MicroGraft, and the wound healed within two months.

1 week post Kerecis product application.

2 months post Kerecis application wound is healed.

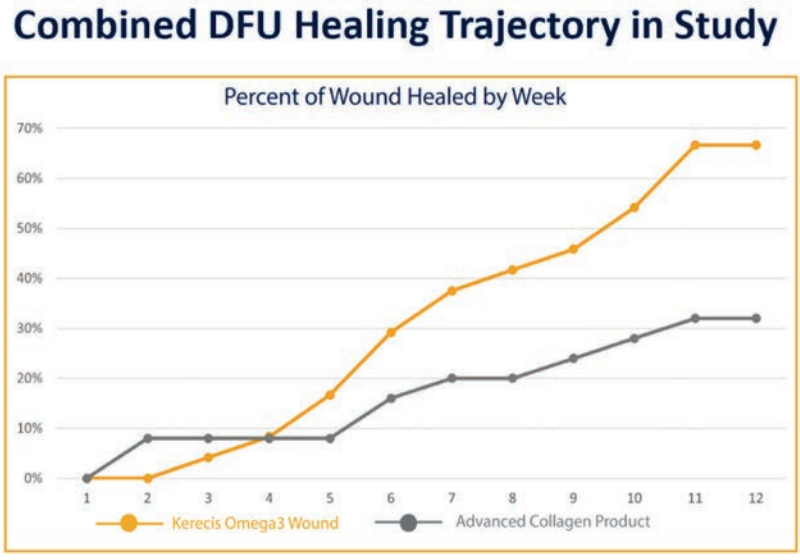
4 months post Kerecis application wound remained healed.

"The results are impressive, and the other great thing is that application is so fast," said Dr. Barron. "Before this, I would stack the OR grafts. I had to do a lot of cutting and trimming to get the exact size and get the graft in direct contact with the wound bed. With MicroGraft, I cut one piece."

Dr. Barron has used other acellular products, which didn't stay in the wound. "They almost ooze out," he said. "MicroGraft is small enough to fill the irregularities, and yet has enough structure to fill in the depth."

He plans to continue using MicroGraft for irregular or deep wounds and to use the OR graft for more superficial wounds.

Dr. Wojnicki from Horizon Health in Paris, Illinois, is



In a blinded, randomized, controlled clinical trial, more previously non-responsive DFUs treated with the Kerecis fish skin grafts were healed at 12 weeks than wounds treated with SOC alone.

successfully treating complex DFUs using Kerecis Omega3 Wound.

One of her patients, a 71-year-old diabetic, had already lost one leg above the knee when he developed gangrene on his other foot. The three-inch diabetic ulcer extended almost to the bone. For five months, Dr. Wojnicki treated the large, draining wound with various SOC methods, including multiple OR debridements and wound vac. "You name it, we did it," she said. "Nothing worked." She had almost resigned herself to the possibility that the patient would have to be on antibiotics and have standard wound care for the rest of his life.

The doctor decided to treat the diabetic ulcer with Kerecis Omega3 Wound. She changed the graft about every other week, and the wound healed in about five months, which was considered fast given the wound's size and severity.

"I can't believe how quickly the wound healed. Other grafts take a while to incorporate. With the fish skin, I do a treatment, and a week later it is gone. The new skin is healthy and tough. I've never had an application show such a dramatic difference."

The patient, who had been considering suicide, is now back to his normal routine. "Kerecis literally saved his life," said Dr. Wojnicki.

"When you think about it, fish skin makes sense," she added, noting that fish skin and human skin are very similar and that fish contains Omega3 fatty acids, which decrease inflammation.

"What's more, application is easy. The product has a long shelf life and doesn't need to be frozen. I make an incision, wet the graph and insert it," she said.

Both podiatrists plan to continue treating complex wounds with the fish-skin grafts. "Kerecis really does the job," said Dr. Wojnicki. "I am completely impressed. I've never seen a product work as well as it does."

"I have seen even serious wounds heal quickly, some within days, without secondary procedures," said Dr. Barron. "The result is fewer procedures and an enhanced quality of life for our patients."

Kerecis Fish-skin Technology & Clinical Study

Kerecis Omega3 is intact fish skin that, when grafted onto damaged human tissue, recruits the body's own cells and ultimately is converted into living tissue. Because no disease-transfer risk exists between cold-water fish and humans, the Kerecis fish skin is only gently processed and retains its similarity to human skin, making it an ideal skin substitute. The fish skin also contains Omega3 fatty acids and multiple proteins that help the product to become incorporated into the body quickly.

A multicenter, blinded, randomized controlled clinical trial evaluated the effectiveness of the fish skin in the treatment of chronic, nonresponsive diabetic foot ulcers. The researchers found that "the application of fish skin graft to previously nonresponsive DFUs resulted in significantly more healed wounds at 12 weeks than SOC alone. The study findings support the use of fish skin graft for chronic DFUs that do not heal with comprehensive SOC treatment."

"The results are impressive, and the other great thing is that application is so fast."—Dr. Barron.

The researchers also noted that the fish skin "is cost effective to produce and has been shown to have the potential to reduce the cost of DFU treatments compared with SOC." (*Wounds* epub April 14, 2021)

The Kerecis technology is available in a variety of products for different types of wounds. Kerecis Omega3 Wound is a traditional, unmeshed graft for chronic wounds. Kerecis Omega3 OR is for surgical wounds and comes in meshed and solid variations. Kerecis Omega3 GraftGuide is for the management of burn wounds.

The new Kerecis Omega3 MicroGraft is intact fish skin fragmented into small units, which can fill hard-to-reach areas. With a particle size of about 0.15 cm, Kerecis Omega3 MicroGraft can easily be applied in hard-to-reach and deep wound spaces.

The intact-fish-skin technology is an FDA 510(k) medical device indicated for managing wounds and is not subject to the May 31, 2021, FDA 351 regulation.

Click here for more information.