

Topical oxygen therapy using a novel hydrogel

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Abstract

Oxygen plays a critical and paramount role in all phases of wound healing but particularly the proliferative stage. For years scientists and surgeons have grappled with the idea of increasing its availability through a variety of methods. Recently, the idea of delivering oxygen topically has attracted the attention of researchers and clinicians and if successful would be a major breakthrough in the treatment of recalcitrant and chronic wounds. This technology appears to be at hand and is based on a bioengineered singular type of water with regenerative engendering properties. Chief among them is the water's ability to deliver oxygen to hypoxic cells. Furthermore, the water also contains 'bioactive lipids' in the form of glycolipids which not only lower the water's surface tension but also stabilizes cell membranes as well as contribute to the skin's overall immunity. This unique combination enables the water to act as the ideal therapeutic topical drug delivery system for skin wounds when it is formulated into a hydrogel. Based on the clinical outcome of dozens of patients, these hydrogels appear to dramatically accelerate the body's innate ability to repair itself following injury.

Biography

Almeleh, is a born and bred native New Yorker and a graduate of both the State University at Binghamton and New York Medical College, 1976, where he completed his residency in general surgery, 1982. He did a postdoctoral fellowship in plastic surgery (1983) at Maricopa County Hospital and Tempe's children hospital and a year in critical care medicine in (1984) at Catholic Medical Center's St. John's hospital in Queens NY. In 1985 he was a clinical assistant professor at Downstate Medical Center and directed the surgical intensive care unit at the Brooklyn Hospital, Brooklyn NY till 1991. Thereafter, he left his full-time hospital-based practice to open a private practice in Queens, NY where he actively practiced general surgery operating at Catholic Medical Center, Parkway and Flushing hospitals until the summer of 2012 when he founded Aquavita Inc. a hybrid water biotech company. He is a diplomate of the American College of Surgery and the author of two highly cited papers dealing with accelerated wound healing on burns utilizing a oxygen delivering hydrogel he has developed.

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