Variations of Negative Pressure Wound Therapy

There have been several reports about the various types of negative pressure wound therapy (NPWT). The most common dressing material is the polyurethane foam sponge, although there have been some reports that did not use any dressing materials.[1] Even for the polyurethane foam sponges, there are wide variations in the coarseness of the mesh.[2]

The dressing sponge can maintain suitable moisture, remove small necrotic tissue clogged in its mesh, and provide a three-dimensional scaffold in the intertrabecular spaces for the granuloma[3] to cause a living reaction which serves to eradicate necrotic tissue and suppress bacterial propagation. In order to gain maximum advantages from NPWT, not only the negative pressure environment, but also the selection of the most suitable dressing material will be necessary.

Regarding the treatment of diabetic foot ulcers, there have been many reports[4] that have evaluated the efficacy of the commercially available VAC®, which uses a polyurethane foam sponge with a relatively coarse mesh. Evaluations of the efficacy of other types of dressing for diabetic foot ulcers need to be performed. With regard to this point, I read the article by Nain *et al*. who used originally designed devices, with great interest.[5] I would like to know more about the "foam-based dressing."

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