Peptides can decrease the incidence of flap necrosis

Research published in *Wounds* has shown that the incident of flap necrosis can be significantly decreased with the peptides, adrenomedullin (ADM) and glucagon-like peptide-1 (GLP-1). Researchers cut a cutaneous flap measuring 8 x 3cm in the abdomens of rats and treated four different groups. The control group was treated with saline and the other three groups were treated with different doses of ADM and GLP-1. All three groups that were treated with peptides had an increase of blood flow to their wound flaps, decreasing necrosis when applied to the superficial inferior epigastric artery. Blood flow was shown to reach all areas of the flaps with the same statistical evidence for all doses. Click here for more info.

Monitoring wound fluid can indicate wound severity

A recent study has found that measuring the amount of uric acid present in wound fluid can help to distinguish the wound’s severity. Uric acid plays a part in inhibiting wound healing as it deposits monosodium urate crystals into the wound, which creates an inflammatory response. By measuring the components of wound fluid, researchers found that when the level of uric acid is high, the wound is more severe and long lasting.

‘With respect to diagnostic applications, the severity of a wound could be monitored by detecting the levels of uric acid or the levels of one or more of the uric acid precursors in wound fluid,’ the researchers explained. ‘Monitoring changes of purine metabolites in wound fluid is therefore likely to provide valuable information regarding the healing patterns of chronic venous leg ulcers.’ Click here for more info.

Device brings comfort to patients with skin damage

Wounds International has launched a 12-page review document, which describes the mode of action of the Skin IQ™ Microclimate Manager (MCM), demonstrating its use in a range of case studies.

The Skin IQ™ MCM is a coverlet with a small negative airflow device, which pulls moisture and heat away from the patient. When used in conjunction with a pressure redistribution mattress, the Skin IQ™ MCM enables control of the microclimate at the interface between the skin and the support surface.

This has potential benefits for patients with many different skin diseases and for those at risk of, or suffering with, moisture lesions and pressure ulcers.

Professor Mike Clark, Nils Lahman and Joyce Black are the main contributors to the document, with support from those working in areas such as intensive care and oncology. In addition, Jackie Denyer, clinical nurse specialist from Great Ormond Street Hospital in the UK, describes its use in a patient with epidermolysis bullosa. She writes that ‘the patient was constantly damp from sweat and the wounds on her feet, and reported immediate comfort from the Skin IQ microclimate manager’.

The case studies demonstrate how the device offers relief and early results indicate improved outcomes. Click here for more info.
**Blocking stress-induced enzymes promotes wound healing**

A group of researchers have discovered that beta-blockers and statins prevent stress-induced enzymes from impairing wound healing.

A study by researchers at the University of Miami Miller School of Medicine, Florida, US, have found that beta-blockers and statins, commonly used for heart complications and hypertension, reduce the effects of stress-induced enzymes, such as epinephrine and cortisol.

Stress-induced enzymes are released systemically or locally and affect wound healing through physiological processes, such as cell migration, metabolism, differentiation, inflammation and proliferation. This inhibits keratinocyte migration and wound epithelisation.

More research into the use of beta-blockers, as well as statins, in elderly patients with chronic wounds are recommended.

Click here for more info.

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**Lymphoedema gene mutation discovered**

A recent study has found a mutation in a gene, which causes lymphoedema as well as eye problems and microcephaly (reduced head size).

The gene KIF11 has been linked to a condition called microcephaly-lymphoedema-chorioretinal dyplasia (MLCRD), which is a genetic disorder affecting the head, eyes and limbs. The discovery, published in the *American Journal of Human Genetics*, is thought to be important for the prevention and treatment of lymphoedema.

Five patients with MLCRD were examined and their genes sequenced, leading to the discovery of the gene mutation the patients all had in common. This was then also confirmed in 24 other patients’ DNA sequences.

The mutation has an impact on protein function and affects the lymphatic system.

Click here for more info.

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**Honey can help to heal perianal fistulas**

A recent study has shown that honey reduces purulent discharge and inflammation in chronic perianal fistulas.

A case study published in the *International Wound Journal* followed a 55-year-old male who had been suffering from ongoing perianal fistulas for the past 10 years. Local γ-irradiated honeydew honey was applied with a syringe either diluted with sterile physiological solution or undiluted. The patient tested positive for *Staphylococcus aureus*, *Staphylococcus haemolyticus* and *Escherichia coli*.

After 10 days of treatment, purulent discharge was reduced, and after 24 days, epithelisation had begun. After five months, fistulas in the left region of the buttocks had disappeared.

Click here for more info.