

Medicinal Leech Therapy: A Compressive Review

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Abstract: *Complementary medicine methods have a long history, but modern medicine has just recently focused on their possible modes of action. Medicinal leech therapy (MLT) or hirudotherapy, an old technique, has been studied by many researchers for possible effects on various diseases such as inflammatory diseases, osteoarthritis, and after different surgeries. Hirudo medicinalis has widest therapeutic usage among the leeches, but worldwide, many different species were tested and studied. Leeches secrete more than 20 identified bioactive substances such as antistasin, eglins, guamerin, hirudin, saratin, bdellins, complement, and carboxypeptidase inhibitors. They have analgesic, anti-inflammatory, platelet inhibitory, anticoagulant, and thrombin regulatory functions, as well as extracellular matrix degradative and antimicrobial effects, but with further studies, the spectrum of effects may widen. The technique is cheap, effective, easy to apply, and its modes of action have been elucidated for certain diseases. In conclusion, for treatment of some diseases, MLT is not an alternative, but is a complementary and/or integrative choice. MLT is a part of multidisciplinary treatments, and secretes various bioactive substances. These substances vary among species and different species should be evaluated for both treatment capability and their particular secreted molecules. There is huge potential for novel substances and these could be future therapeutics.*

Keywords: Leech Therapy

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