Device for Treating Venous Congestion

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Technology description

Venous congestion, where excess blood pools in replanted tissue, is a potential post-surgical complication of reconstructive or microvascular surgery. If surgical correction of venous congestion fails, the current method of treatment involves applying live, medicinal leeches to the congested area. However, leeches can move off congested tissue and feed on normal skin, are difficult to use near body openings because of their potential for migration, may harbor serious pathogens and can remove only a limited quantity of blood. UW-Madison researchers have developed a simple mechanical device to remove excess blood from congested tissue. The device contains a shell, which acts as a collection chamber. The rim of the shell is placed against the patient’ s skin to define a suction area. The shell supports a conduit terminating in a widened, delivery tip, which supplies anticoagulant subcutaneously through a skin incision. The tip may be agitated to disrupt clot formation. A suction port is attached to the shell through which recovered anticoagulant and blood may be withdrawn from the inner volume. The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a simple mechanical device to remove excess blood from congested tissue.

Application area

Treatment of venous congestion
Removal of excess blood from congested tissue

Advantages

Offers simple, effective alternative to medicinal leeches
Significantly increases patient comfort
Provides improved removal of blood from congested tissue
May include an air inlet port that provides a path of air entry to the skin surface
May include a sensor to detect blood outflow volume, allowing semi-automatic operation

Institution

Wisconsin Alumni Research Foundation

Inventors

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