

Applications

- Rapidly stops bleeding
- Emergency situations

Advantages

- Permits adjustment of pressure applied to wound
- Allows efficient treatment of multiple wounds
- Reduces damage to surrounding blood vessels and vital tissues
- Significantly faster than traditional treatments

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Market Need

Stopping bleeding within a wound cavity presents a unique problem in emergency situations. Traditionally, the wound cavity is filled with gauze or absorbent powders and then pressure is applied or a tourniquet is applied above the wound site halting blood flow. But, traditional methods run the risk of over or under applying pressure to the wound site as well as damaging surrounding blood vessels and tissues. These issues are further compounded when there are multiple wound cavities that must be treated in a short period of time. Thus, significant research is being performed to address these problems in emergency situations.

Technology Summary

VCU clinicians have developed a new device for applying pressure to wound cavities in order to rapidly stop bleeding. By utilizing this gas activated device, emergency responders can apply the optimal amount of pressure to the wound cavity while minimizing the risks to surrounding tissues that are inherent in traditional treatment methods. The device also permits the delivery of hemostatic agents to the interior surfaces of the wounds cavity, therefore combining pressure and clotting agents for maximum effectiveness.

Further, this device has been shown to rapidly stop bleeding. In animal tests, the device stopped bleeding to an otherwise fatal hemorrhage. Using this device, emergency responders could quickly address multiple, difficult to treat wounds.

Technology Status

Patent pending: U.S. rights are available.

This technology is available for licensing to industry for further development and commercialization.