Factor Concentrator Gauze combined with Endothermic Reaction used to combat Very Proximal Traumatic Amputation Hemorrhaging

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Technology description

Invention Description

Injuries that result into large scale hemorrhaging are a substantial issue that is hard to address, especially in situations where the immediate professional treatment of these injuries is not possible. There are common solutions to attempt to delay the hemorrhaging by bandaging any affected area and trying to lower blood circulation to the area but often it may prove to be futile as the constant bleeding will more likely not subside as intended. With the development of specialized bandages that can induce blood clotting this problem can be somewhat solved to an extent that will overall reduce the blood flow outside of the wound and give the injured individual more time to get an available treatment for it, think of a battlefield injury or motor cycle accident for example. UTSA innovators saw this issue and took charge to improve existing blood clotting gauze types to improve vasoconstriction and give the injured a greater chance at life.
UTSA innovators createdColdClota new medical device that combines hemostatic gauze and newer water absorption methods to better slow hemorrhages and better prevent hemorrhage induced coagulopathy. Due toColdClot'sspecialized absorption techniques,ColdClotreserves the ability to trigger clotting cascades much earlier in the wound treatment process, additionally through an endothermic reaction caused byColdClot'sunique design materials,ColdClotfurther enhances platelet activity and vasoconstriction for the wound. All in all,ColdClotwith its unique absorption capabilities and thermally induced vasoconstriction, proves to be a fundamentally improved hemostatic gauze device with unique capabilities not intrinsic to contemporary solutions.

Application area

Primary application is to slow or stop diffusive hemorrhaging over a large surface area, additionally to extend the life of the wounded until they can be safely evacuated or treated. This device inclines to be used in either the battlefield or domestically in emergency situations like natural disasters or vehicular accidents.

Advantages

Thermally Induced Vasoconstriction:ColdClottriggers an endothermic reaction to induce an earlier stage of vasoconstriction thereby greatly reducing blood flow from the injury.
Absorption:ColdClot'sprofound design allows for heavy absorption of the water content in the blood which induces an earlier clotting cascade.

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