Welcome to Medtrade

2024

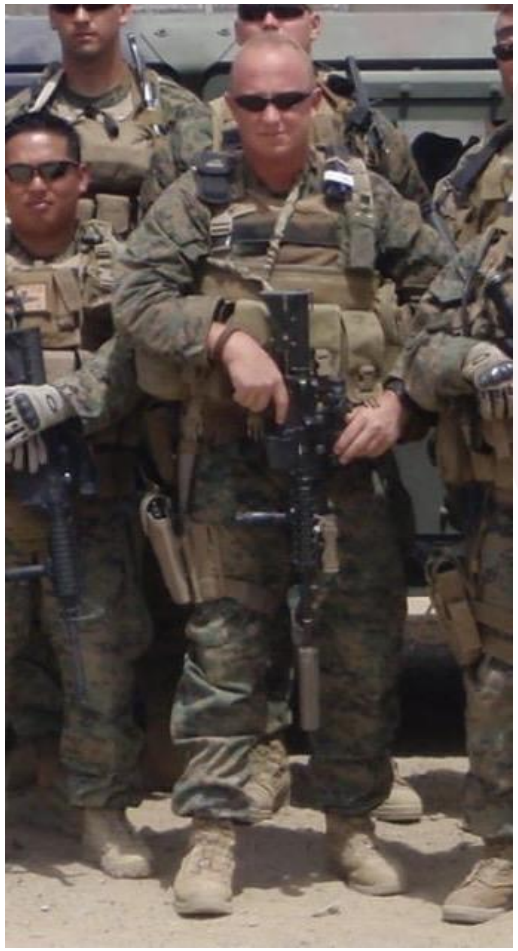
Who am I

Clinical Education Manager
Celox Medical

Retired Fire Captain
Henderson Fire Department

Nationally Registered
Paramedic

FORMER Special Amphibious
Reconnaissance Corpsmen
U.S Navy

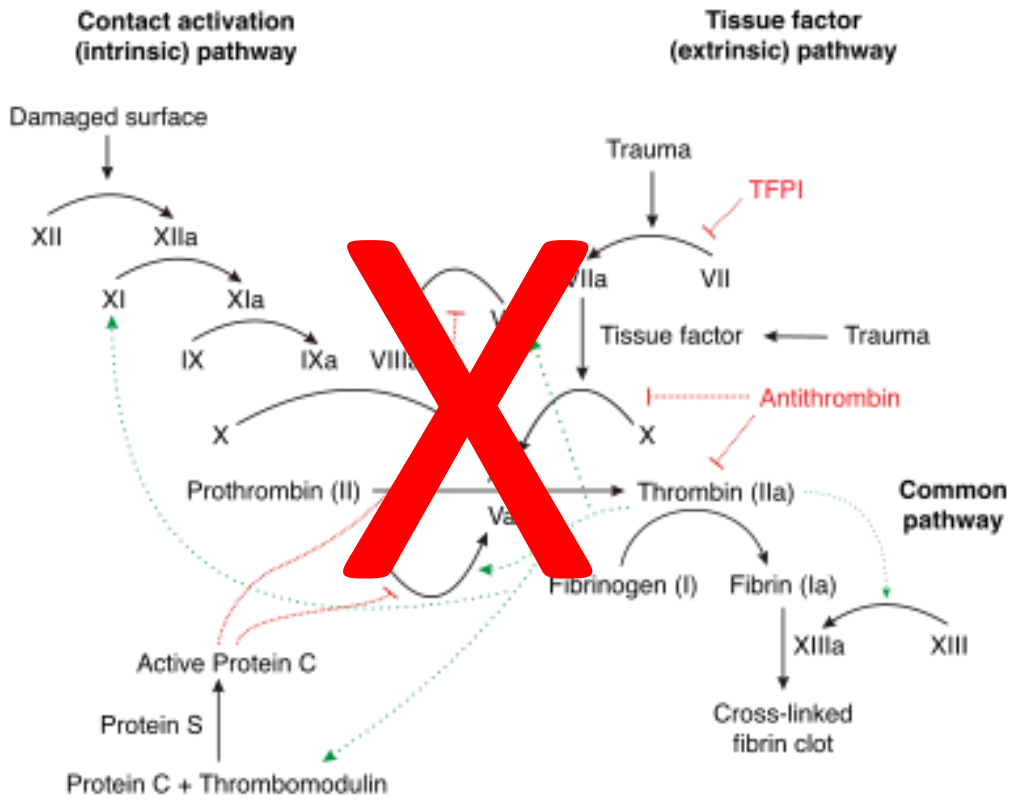


WHAT IS CELOX

Whilst the main ingredient in Celox is Chitosan, Chitosan itself does not create a stable pseudo clot, Chitosan requires conversion into Celox salt granules to create a robust stable mechanical clot.

- Manufactured from the shells of a particular species of shrimp (waste product from the food industry).
- Extract Chitin and convert to Chitosan
- Convert chitosan into Celox salt granules through a unique patented process
- Celox comes in 2 forms, granules or gauzes

PRIMARY MODE OF ACTION FOR CELOX



Celox key simple steps:

Step 1 – **Absorbs** fluid from the blood to create a robust gel clot, which seals the injury site, ***independently of the clotting cascade***.

Step 2 – **Adheres** to the point of bleeding and surrounding wet tissue, maintaining the gel plug in place and ***minimising re-bleed*** during movement of the patient.

Step 3 – **Attracts *anionic red blood cells*** to the injury site creating a conducive environment for the body's natural clotting cascade.

Step 4 – Maintains gel plug in place whilst natural clot forms and then ***naturally breaks down through enzyme degradation*** (lysozyme) into glucosamine, which is excreted from the body.

CATASTROPHIC HAEMORRHAGE IN MILITARY MAJOR TRAUMA PATIENTS:

Mark Winstanley, J E Smith, C Wright[3]

Objective:

This study analyses the use of haemostatic dressings used in patients injured on the battlefield and their association with survival.

Method:

A retrospective database review was undertaken using the UK Joint Theatre Trauma Registry from 2003 to 2014, during combat operations in Iraq and Afghanistan. Data included patient demographics, the use of haemostatic dressings, New Injury Severity Score (NISS) and patient outcome.

Results:

Of **3792** cases, a haemostatic dressing was applied in **317** (either Celox, Hemcon or Quickclot).

When comparing patients who had a haemostatic dressing applied versus no **haemostatic agent**, there was a **7% improvement in survival**.

Celox was the only individual haemostatic dressing that was associated with a statistically significant improvement in survival (21% vs 1%), most apparent in the more severely injured (NISS 36–75).

MAJOR HAEMORRHAGE IN CIVILIAN TRAUMA PATIENTS:

A major study has concluded that Celox Haemostats achieved 100% Haemostasis on first application with no adverse events and 99% end user satisfaction

Objective:

The primary objective of this study was designed to assess the safety, efficacy and performance of the Celox product range on civilian casualties within the UK.

The secondary objective was to determine user satisfaction.

Method:

Clinicians from 45 hospitals across the UK completed a post market clinical follow up survey that captured number of cases (n=290), types, locations and severity (NISS) of injuries, and success of haemorrhage control by product type.

Results:

290 cases involving single or multiple wounds, with **99.3% success rate on first application** with **no adverse events** or anaphylactic reactions.
Celox Rapid was the most commonly used product (**84 cases**) achieving **100% haemostasis faster** than other Celox products.
19 Patients taking anticoagulants.
99% end user satisfaction.

POST PARTUM HAEMORRHAGE:

A recent case study conducted at Charite University Hospital, Berlin has concluded that Celox PPH provides a safe, effective and simple to use device that outperformed existing medical devices commonly utilised to treat this condition.

Objective:

The primary objective of the clinical study was designed to assess the safety, efficacy and performance of Celox PPH Haemostatic gauze to treat Post Partum Haemorrhage.

Method:

Celox PPH Gauze was packed into the uterus via vaginal entry (59%) or via c-section surgical access (41%) and left in situ for up to 24hrs.

Results:

- **100% haemostats achieved up to 2500mls blood loss.**
- **95.7% haemostasis achieved up to 8000mls blood loss**
- **Haemostasis achieved despite presence of coagulopathy.**
- **Significant reduction in need for hysterectomy 78%.**
- **No adverse events**

Discussion:

Every 5 minutes a woman dies from Post Partum Haemorrhage, representing approximately 80 – 100,000 deaths per year, the majority occurring in low middle income (LMI) countries. Celox PPH has been reviewed to establish suitably to address this important clinical need.

CLINICAL BENEFITS - CELOX

A patented, fast-acting haemostatic formulation that stops bleeding within **1 minute independently of the body's clotting mechanism[2]**.

Indicated for life-threatening bleeding, including major arterial, blast-type injuries and other deep wounds.

1. **Speed of action** – x3 times faster than other haemostats[2], reduced blood loss, increased survivability[3]

2. **Works independent of the body's natural clotting cascade –** 50% of patients suffering a traumatic injury will be coagulopathic, and increasing numbers of the general population are taking blood thinning medication

3. **Clot robustness** – the artificial clot formed by Celox is held in place with greater adhesive strength due to the bioadhesive non-woven gauze, reducing the likelihood of clot dislodge during patient transfer

New Product Developments

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