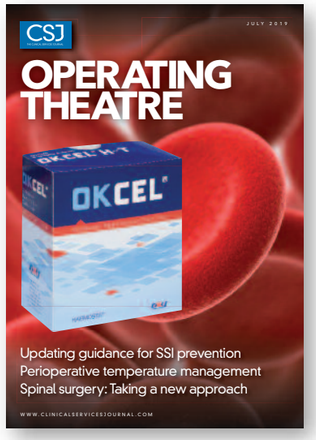
The haemostat absorbing your cost pressures

Hospitals have been using the same product for over 50 years, potentially overspending by thousands - it's time to review your absorbable haemostats

The absorbable haemostat was invented over 50 years ago, when scientists discovered that adding oxygen to plant-based fabrics caused complete absorption when placed in blood. Medical device companies used this discovery to invent, what was at the time, a clinical practice changing product. It is now standard practice to use an absorbable haemostat in a vast array of surgical procedures, from minimally invasive, to open surgery. Although the original haemostats from the 1960s are still functional in modern medicine, there have been vast advancements in product development and technology. Some hospitals and surgeons are yet to adopt the modern products, despite them being more effective than the original products and potentially cheaper, though many have. Traditional absorbable haemostats are manufactured using regenerated absorbable cellulose (ORC), which is the chemical modification of cellulose. Modern haemostats are manufactured from premium quality, extra-long staple cotton, therefore are natural products. Oxidised cellulose (OC) haemostats have very similar characteristics and practically the same indication as oxidised regenerated cellulose, however, they differ in some properties that can be considered as important for their clinical use.

The Research

Independent research has been carried out comparing two types of haemostats, testing what are considered the key components of an absorbable haemostat. These include area density, structure, bio-resorbability, absorbency, pH level, and (re)positioning. The two products used in the study were Okcel for the oxidised cellulose and a commonly used oxidised regenerated cellulose. The research paper compared and contrasted what is considered the main features of an absorbable haemostat and



Okcel (OC) came out favourably in the vast majority of the experiments.

Haemostasis

The main purpose of a haemostat is to stop unwanted bleeding during a surgical procedure, also known as haemostasis. There are several features that can affect haemostasis, including but not limited to, area density, pH Level and absorbency. When testing these aspects, the research found that Okcel had a greater area density than ORC across the entirety of the Okcel range, with Okcel S (coming to the UK market later this year) having the greatest difference with almost double the area density from the same size piece of material. The second feature considered was the pH level, as generally a lower pH value has a positive effect on haemostasis. Okcel HD, F and S all had lower pH levels than their ORC counterpart, the only format that didn't was HT, which was very similar at only 0.06 higher. Arguably, the most important feature of any haemostat is absorbency, i.e how much blood the products can actually soak up. Once again Okcel came out on top across the range. This can be largely attributed to the properties identified by the images in figure 1. Okcel offers a much more tightly knit material which increases area density and gives a higher surface area, allowing greater absorbency, thus contributing to faster haemostasis.

Okcel - The Oxidised Cellulose Haemostat

Okcel is manufactured by Synthesia and is distributed in the UK by Uniplex (UK) Ltd. Okcel comes in three forms standard (HT), heavy-duty (HD) and cotton wool form (F), with Okcel S, the woven form of oxidised cellulose to be released to the UK market in quarter four of 2019. Okcel products are available in the industry standard sizes for simplified conversion. Okcel achieves haemostasis in under 3 minutes and is fully absorbed by the body within 21 days without any residues. The products have been used for over 20 years and utilised in excess of 3 million surgical procedures across the globe.

The Manufacturer, Synthesia

Synthesia is a major European manufacturer, active in the area of special chemicals, with over 95 years of experience in the sector. The Czech company manufactures oxidised cellulose based haemostatic products, which are being used in the biomedical segment with a particular focus on professional surgery.

The distributor, Uniplex (UK) Ltd

Uniplex (UK) Ltd has been active in the medical device industry for over 40 years, focusing on the operating room, sterile services and the endoscopy suite. The Sheffield based company is a surgical instrument and medical device manufacturer, distributor and repairer. Uniplex has been distributing high-quality haemostats for 12 years and formed a partnership with Synthesia in 2011 to become the sole distributor for Okcel in the UK. ■

What the research says[1]

- Okcel (OC) has a higher surface area than ORC, which directly leads to faster haemostasis
- OC has a higher fluid absorbency than ORC
- Okcel Heavy-Duty and Cotton Wool Form has a lower PH than ORC haemostats and very similar in the Standard form
- OC haemostats are easier to reposition than ORC, as they retain their original shape and size
- Okcel absorbs into the body faster than ORC
- Okcel has a higher area density than ORC, one of the factors that support fluid absorbency

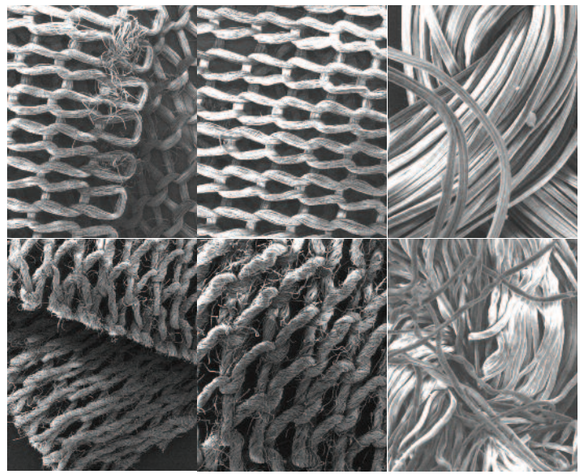


Figure 1: Okcel and Market Leading ORC at 500x magnification under an electron microscope

References

1. Jindřich Lahovský, (2019) Comparison of basic physiochemical parameters, USP parameters and mechanical and biological performance of regenerated and non-regenerated oxidized cellulose-based haemostats: A-Pharma s.r.o. contract research organisation, Study Report Ref. No.AP-SY-1901

uniplex

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Case Study: Major Cardiac Foundation Trust Saves over £350,000

Royal Papworth NHS Foundation Trust adopted Okcel back in 2014, after being made aware of the huge savings that could be achieved by switching from the market-leading haemostat to the Okcel alternative. The cardiac hospital and International Centre of Excellence has a large requirement for the cotton wool form of Okcel, due to the nature of cardiac surgery. Okcel F offers faster haemostasis, more accurate placement and increased adaptability over the original form of the product. Since switching to Okcel in 2014 Royal Papworth have saved over £350,000 from their previous provider and continue to save over £90,000 a year.

The savings aren't only achievable on the Okcel F range, but also on the standard and heavy-duty Okcel range with savings on the standard range up to £30 per unit and on the heavy-duty range of up to £75 per unit.

Savings are calculated using the official NHS Supply Chain Catalogues from the 2014 - 2018 editions