Steroidal Hemostatic Surgical Adhesive

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Technology description

Technical Summary

Surgical adhesives are commonly used during vascular surgery to help achieve hemostasis. These tissue sealants function as relatively non-toxic fluid barriers that are rapidly biodegraded and are often used in the place of sutures. Despite the benefits of stable tissue adhesives, a considerable number of complications still arise following surgical procedures. To combat these surgery-related complications, anti-inflammatory agents are used to reduce infections and cardiac arrhythmias that commonly occur following routine surgeries. However, pre-emptive treatment of anti-inflammatory steroids at the time of surgical adhesive application could provide for a more meaningful outcome and drastically reduce the number of surgery-related infections.

To address this need, Emory University researchers have developed a method for anti-inflammatory steroids to be administered within a surgical adhesive polymeric matrix or gel. This technique provides a means to deliver anti-inflammatory agents directly to the surgical wound immediately following the surgical procedure. By administering the steroid with the surgical adhesive the contact time of the steroid with the exposed tissue is dramatically increased. Thus, this method effectively allows for the local delivery of pharmacologic agents to prevent post-operative inflammation and infections including cardiac arrhythmias.

Application area

Steroid Adhesive that prevents post-surgical inflammation, infections, and cardiac arrhythmias.

Advantages

Achieves local, targeted delivery of anti-inflammatory agents to prevent conditions associated with post-surgical inflammatory or infectious conditions such as cardiac arrhythmias.

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