Biomaterials for surgical operation

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Abstrak

Biomaterials for surgical operation offers a review of the latest advances made in developing bioabsorbable devices for surgical operations which include surgical adhesives (sealants), barriers for the prevention of tissue adhesion, polymers for fractured bone fixation, growth factors for the promotion of wound healing, and sutures. Over the years, many descriptions of biomaterials have appeared in academic journals and books, but most of them have been devoted to limited clinical areas. This is in marked contrast with this volume which covers a wide range of bioabsorbable devices used in surgery from a practical point of view. The currently applied polymeric devices are critical in surgery, but all involve serious problems due to their poor performance. For instance, fibrin glue, the most widely used surgical sealant, can produce only a weak gel with low adhesive strength to tissues, accentuating the limited effectiveness of current treatment options. Likewise, the currently available barrier membranes cannot fully prevent tissue adhesion at the acceptable level and are, moreover, not easy to handle with endoscopes due to their poor mechanical properties