Study of Anti-Adhesion Barriers using Gellan gum

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Abstract

Adhesions are internal scars, strand like fibrous tissue that form an abnormal bond between two parts of the body after trauma or surgical operations. In fact, 55% to 100% of patients are shown to have adhesions at subsequent surgeries. For most patients, adhesions formation has little effect. However for some patients, adhesions can cause severe clinical consequences, such as failed back surgery syndrome, infertility, and reoperation. In this study, we attempted to make anti-adhesion barrier using gellan gum with being animal experiments, which used Sprague Dawley rats(SD-rat), between tissues and nerves after surgical operations. Experimental results are showed that the amount of scar tissue and tenacity were reduced grossly and histrionically at postoperative 2, 4, 8 weeks in SD-rat animal model using anti-adhesion barriers. Anti-adhesion barrier's material was absorbed around 4 weeks of postoperative period in SD-rat model. Anti-adhesion barriers significantly reduced the amount of scar formation and tenacity in SD-rat

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