

Strategies for Postoperative Seroma Prevention: A Systematic Review. [Review]

Authors: Janis JE, Khansa L, Khansa I

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Abstract:

BACKGROUND: There is conflicting evidence on the effectiveness of the various strategies to prevent postoperative seroma. Many high-quality studies have been performed to evaluate those strategies, but the numbers of patients included in those studies have been small. The authors' goal was to perform a systematic review of all Level I and II studies on the prevention of postoperative seroma.

METHODS: A PubMed search was performed of all Level I and II studies that evaluated strategies for the prevention of postoperative seroma. Only English-language comparative studies on humans, defining seroma as a postoperative serous fluid collection detectable on physical examination, were included. Data from all the studies were compiled, and a systematic review was performed to evaluate the effectiveness of each strategy.

RESULTS: Seventy-five studies comprising 7173 patients were included. Effective strategies for seroma prevention included the use of closed-suction drains; keeping the drains until their output volume was minimal; maintaining a high pressure gradient in the drains; using sharp or ultrasonic dissection rather than cautery; dissecting the abdomen in a plane superficial to the Scarpa fascia; ligating blood vessels with sutures or clips; using quilting or progressive tension sutures; using fibrin, thrombin, or talc; and immobilizing the surgical site postoperatively. Surgical-site compression did not prevent seroma accumulation. The use of sclerosants at the initial operation actually increased

the risk of seroma.

CONCLUSIONS: Seroma is a common and frustrating complication in plastic surgery. This study demonstrates that simple strategies can be used to lower the risk of seroma.

CLINICAL QUESTION/LEVEL OF EVIDENCE: Therapeutic, II.