

FASTER ABDOMINAL CLOSURE BASED ON DYNAMIC SUTURES

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Background: Treatment of the open abdomen is especially difficult due to the laparostoma resulting from retraction of the rectus abdominis. Additionally the natural inner abdominal pressure does his part. When wound healing is finished it is getting quite challenging to retract the muscles to ensure for a proper sturdiness of the abdominal wall and prevent the patients from secondary following complication as rectus diastasis, gastrointestinal and pancreatic fistulas, postoperative delayed abscess, herniation and motion restrictions.

In the management of the open abdomen, topical negative pressure therapy (TNP)* plays a major role. But even with vacuum application the closure of the muscular wall can not be guaranteed.

Methods: Observations were made on 20 patients with an open abdomen. Two groups were formed (n=10/10) both treated with abdominal vacuum devices at 125mmHg continuous pressure. Group 1 (n=10) was treated with TNP* only whereas in group 2 (n=10) vacuum therapy was combined with dynamic sutures.

Results: Results showed that median TNP*-therapy-duration was reduced from medium 19d in group 1 to 15d average in group 2. Furthermore in all patients (10/10) treated with dynamic sutures (group 2) the abdominal wall closed whereas patients treated with TNP* only in just 5 out of 10 patients a closure was obtained. The patients where primary closure was no plastic reconstructive procedure had to be performed to rebuild the abdominal wall.

Conclusion: This investigation had showed dynamic sutures cared for shorter therapy duration through preventing the retraction of the M rectus abdominis.

It was able to shorten TNP*-therapy-duration significantly and care for closure of the abdominal wall in 100% of the patients, which is essential for a satisfying result.

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