Can Intraoperative Punction of the Colon Improve the Patients Outcome ?

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Introduction:

In the procedure of abdominal surgery, the gas-filled colon often hinders the clear recognition of the situation. In emergency surgery, patients are usually not prepared. Paralysis or stenoses are the most frequent causes of a gas-filled colon. Most surgeons avoid intraoperative punction because of the risk of contamination. We here present a save technique of this procedure that has been proved for 14 years.

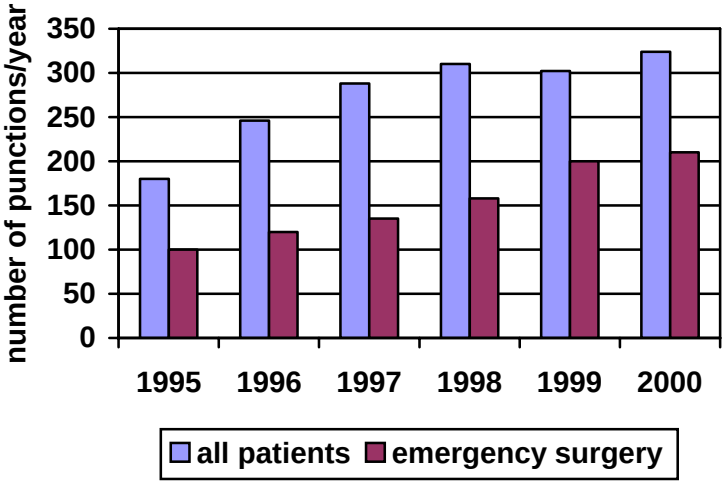


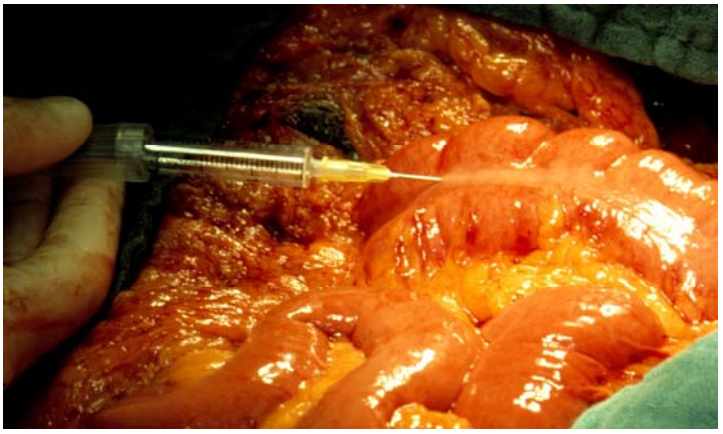
Table 1: Number of intraoperative punctions of the colon per year from 1995 to 2000 in the Department of Abdominal surgery, City Hospital Fulda

Patients, Methods and Technique:

Experiences with intraoperative colon punction have existed for approximately 20 years. We standardized the method to prove its safety in the following way: A 20 G needle is connected to a suction apparatus with suction of -0,4 to -0,6 atmospheres. Tangential punction is done in the free taenia of the colon. The intramural way should be longer than 1 cm. After entering the colon's lumen the pinpoint must not touch the mucous coat so as to avoid a second punction or aspiration of the intestinal wall. If the needle is put too deep into the colon's lumen, liquid and faeces will block the needle. So this method is not appropriate for suctioning liquids, but only to eliminate the gas from the colon. After punction the perforation should be disinfected.
We performed this standardized procedure in more than 1600 cases (patients age ranges from 4 to 98 years). 57 % were done in emergency surgery. 83 % (n=1245) of all patients had colon resections.

Conclusion:

Intraoperative punction in the described way is a completely save procedure. Correct punction has a complication rate of 0 %. Our experience with this technique shows a significantly ameliorated overall view especially in emergency surgery. We presume that the patients' outcome can be improved by applying this method in the right situation.



Picture 1: Intraoperative punction of the gas-filled colon transversum. The needle is inserted in the free taenia.

Results:

In 94 % the surgeon described a significantly better view after punction. Intra-abdominal contamination, infection or abscesses caused by punction did not occur. Relaparotomies were necessary in 4 % (3 hours to 15 days after first operation), but for other reasons. Here, the punction area was completely inconspicuous. The mean follow-up time in hospital was 15 days (range 6 to 64 days).

The described procedure is completely save and easy. In no case any infection because of colon punction occurred, so that the fear of complications is not justified, even in emergency surgery. It supports the clear recognition of the situation when the colon is gas-filled, so that it can be done by every surgeon without any risk.

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