

# End operative induced hypertension reduces total blood loss in lap gastric bypass surgery. (lap RNY)

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## Background and Goal of Study

- Bleeding after lap RNY surgery:
  - the most frequent complication (1)
  - requires frequent transfusions, reinterventions (2).
- Increasing the SAP to 140 mmHg visualises the bleeding spots during laparoscopy and creates the possibility to clip bleeding vessels. (3)
- Introduced at the beginning of 2008 the number of revisions for post operative bleeding dropped to almost zero end 2008. A randomized study was not ethical acceptable anymore.
- The aim of this study was to examine retrospective “the timing effect of increasing the SAP during surgical inspection on the incidence of early postoperative bleeding” in all lap RNY.



## Results & Discussion

□ 87 patients of the 3263 patients operated for lap RNY developed post operative bleeding requiring no treatment in 1,01 %, blood transfusion only in 1,1 % and re intervention in 0,61 %. ANOVA test shows that 2009 is significant different from the other years ( $p = 0.002$ ) see graph1.

□ We started at the beginning of 2008 with raising the blood pressure during surgical inspection of the staples. First by giving vaso active drugs (ephedrine and/or phenylpehrine) and later by permissive hypercapnia increasing cardiac output.

□ In 2009 reintervention dropped to 0,1 % and transfusion to 0,61 %

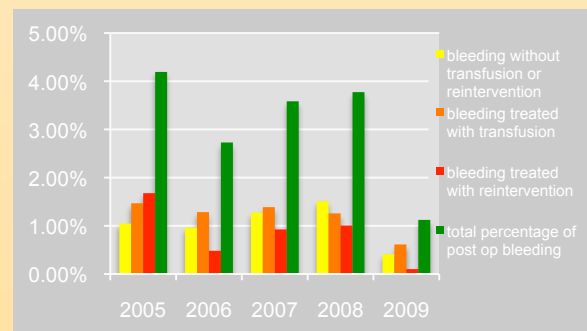
□ Graph 2 gives the monthly numbers. In autumn 2008 the incidence of bleeding dropped. The systematic adaptation by every anesthesiologist in every patient took time. In the last years some other factors changed gradual like surgical removal of blood vessels close to the circular anastomosis and changes in the quality of circular and linear staples.

□ Paroz used a controlled postoperative tension below 140 with admission on the intensive care to reduce the blood loss.(4)

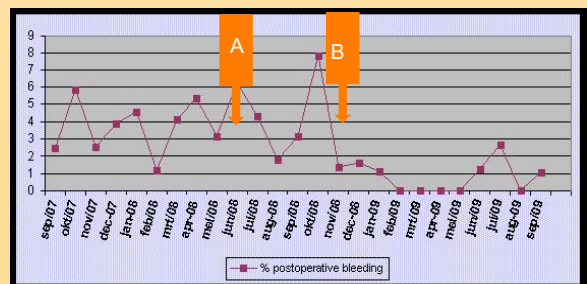
## Materials and Methods

- A retrospective review of the incidence of bleeding in all patients who had undergone lap RNY since 2006 until September 2009 was performed with approval of ethical committee.
- Early post operative bleeding first 24 hours =
  - clinical signs of heavy blood loss
  - blood transfusion
  - surgical reintervention for bleeding

Graph 1



Graph 2



## Conclusion

- Blood transfusions and revisions due to blood loss dropped significant. This is related to SAP increase to 140 mmHg but a causal relationship could not be concluded by this study.

## References:

- (1) Nguyen NT. Obes Surg. 2004
- (2) Mehran A, Am J Gastroenterol. 2008
- (3) J. P Mulier. IFSO 2007
- (4) A Paroz IFSO 2007