

VASCULAR ENDOTHELIAL GROWTH FACTOR PLASMA LEVELS IN PATIENTS WITH CANCER OF THE LEFT COLON SUBMITTED TO OPEN OR LAPAROSCOPIC SURGERY

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Abstract

Background: VEGF is elevated in plasma of colon cancer patients and increases after surgery. This study's purpose was to determine plasma VEGF levels before, during, and after open and laparoscopic colorectal surgery performed for left colon cancer (CD).

Patients and methods: a multicenter, prospective, observational, non-randomized study was planned to evaluate samples obtained preoperatively, intraoperatively, and on postoperative days (1, 3, 7, 15, 30). VEGF-A₁₆₅ values were determined via ELISA. Statistical analysis was a repeated Anova with interactions.

Results: the recruitment finished in 4 years (71 patients). Baseline plasma VEGF-A₁₆₅ mean values (pVmv) resulted not significantly different in patients submitted to laparoscopy (125.4 pg/ml \pm 47.7) and laparotomy (116.3 pg/ml \pm 28.9). Intraoperatively, the highest difference was registered at the end of operations. In the 30-days postoperative period, the pVmv resulted significantly lower ($G-G=0.45$) in patients submitted to laparoscopy than in patients submitted to laparotomy ($F=144.6$, $p<0.001$), at time went on ($F=97.6$, $p<0.001$); the highest differences between groups were registered at day 7.

Conclusions: the trial supports the hypothesis that cancer and surgical trauma are related to production of VEGF-A₁₆₅ and demonstrates that open surgery, in comparison to laparoscopy, is a stronger promoter of VEGF release.

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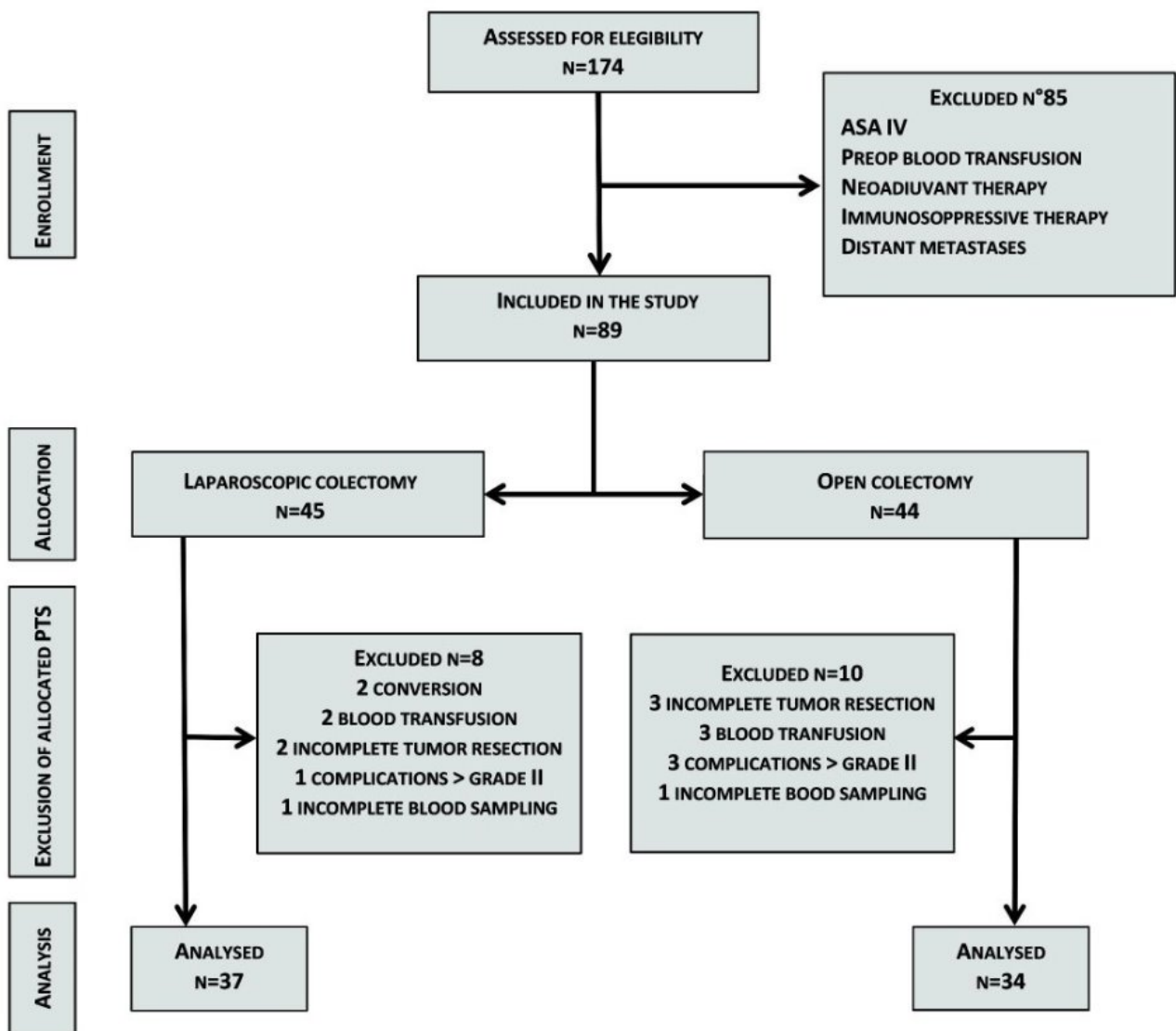
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Guidelines

No guidelines

Protocol

Step 1.



Warnings

Contradictory data regarding VEGF levels have been published; randomized prospective studies have not detected a significant difference on plasma and serum VEGF levels between laparoscopic and open surgery in colon cancer patients. However, it should be clearly noted (WARNING) that some reports had lack of homogeneity both in patient categories and surgical procedures.