Torino Eye Hospital
Dr. Andrea Grosso
Via Juvarra 19
10100 TORINO
Italy

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Abstract : INTRAOCULAR PRESSURE VARIATION DURING COLORECTAL LAPAROSCOPIC SURGERY: STANDARD PNEUMOPERITONEUM LEADS TO REVERSIBLE ELEVATION IN INTRAOCULAR PRESSURE

Dear Dr. Grosso,

**On behalf of the Program Committee we have pleasure to inform you that your abstract has been accepted for "ORAL" presentation during the 14th World Congress and the 22nd EAES International Congress.**
Abstract title  INTRAOCULAR PRESSURE VARIATION DURING COLORECTAL LAPAROSCOPIC SURGERY: STANDARD PNEUMOPERITONEUM LEADS TO REVERSIBLE ELEVATION IN INTRAOCULAR PRESSURE

Author  Dr. Grosso, Andrea, Torino Eye Hospital, Torino, Italy

Co-author(s)  Scozzari, G, University of Torino, Torino, Italy
Bert, F, University of Torino, Torino, Italy
Galiotti, E, University of Torino, Torino, Italy
Allaix, ME, University of Torino, Torino, Italy (Presenting author)
Siliquini, R, University of Torino, Torino, Italy
Panico, C, Torino Eye Hospital, Torino, Italy
Morino, M, University of Torino, Torino, Italy
Crowston, J, University of Melbourne, Melbourne, Australia

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Abstract text  INTRAOCULAR PRESSURE VARIATION DURING COLORECTAL LAPAROSCOPIC SURGERY: STANDARD PNEUMOPERITONEUM LEADS TO REVERSIBLE ELEVATION IN INTRAOCULAR PRESSURE.
**Aim.** Intraocular pressure (IOP) may rise during laparoscopic colorectal surgery (LCR), particularly when a Trendelenburg position is necessary. Surprisingly, in some patients the IOP persists elevated for several months after surgery. This study aimed to evaluate the potential fluctuations of IOP during colorectal laparoscopic surgery.

**Methods.** For this prospective study 45- to 85-year-old patients undergoing LCR were enrolled after a thorough ophthalmologic assessment. The study protocol included measurement of IOP before, during, and after surgery using a contact tonometer (Icare, Finland) in both eyes.

**Results.** The study enrolled 29 patients: 17 (58.6 %) with Trendelenburg position placement during surgery and 12 (41.4 %) without Trendelenburg positioning. The two groups did not differ in terms of gender, age, body mass index (BMI), American Society of Anesthesiology (ASA) class, or operative time. In all the patients, pneumoperitoneum induction led to a mild rise in IOP, averaging 4.1 mmHg. The patients with Trendelenburg positioning showed a greater increase than the patients without it (5.05 vs 4.23 mmHg at 45 min; p = 0.179), but IOP evaluation 48 h after surgery showed no substantial differences between the two groups. Among the 29 patients, 17 (58.6 %) showed an increase in IOP of 5 mmHg or more during surgery. A greater percentage of the patients who underwent Trendelenburg positioning showed an IOP increase of 5 mmHg or more (76.5 vs 33.3 %; p = 0.020). At the multivariate analysis, no potential predictors of increased IOP during surgery was identified.
Conclusions. Standard pneumoperitoneum (B14 mmHg) led to mild and reversible IOP increases. A trend was observed toward a greater IOP increase in patients with Trendelenburg positioning. Thus, the patient’s position during surgery may represent a stronger risk factor for IOP increase than pneumoperitoneum-related intraabdominal pressure.

Sincerely,
Congress Secretariat
EAES Office
P.O. Box 335
5500 AH Veldhoven
The Netherlands
tel: +31 40 2525288
fax: +31 40 2523102
e-mail: registration@eaes.eu
Abstract internet id 686