

## Control of CVP, during major liver resection, by total intravenous anesthesia (TIVA) using target control infusion (TCI)

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We report our experience about the effectiveness of Total Intravenous Anesthesia (TIVA)-by Target Control Infusion (TCI) during major liver resection, in control of CVP, which is very important to reduce bleeding and transfusion of red packed cell. We studied 20 patients, of median age 67, 50, IQR 60-70, range 38-81, 14 male and 6 female, ASA physical status II-III, with primary and metastatic liver tumors, undergoing to major hepatic resection. All of them were anesthetized by TIVA-TCI technique with propofol (Schnider site effect model) and remifentanyl (Minto site effect model) that were titrated manually, and cisatracurium given by boluses.

The parameters studied during operation were: median arterial pressure (MAP); central venous pressure (CVP); blood loss; and Hb levels before and at the end of surgery; fluids.

All patients were extubated at the end of operation; patient ASA II were admitted to ward, instead the patient ASA III were admitted to the postoperative intensive care unit, nobody required postoperative ventilation. No postoperative mortality and major morbidity were observed. Only two patients were transfused with red packed cell (1 unit each), one of them was cardiac patient and his Hb fell 8.9g/dl, and the second was a young woman, whose Hb before surgery was 9g/dl and fell to 7g/dl. The CVP was maintained under levels of 4 cmH<sub>2</sub>O median values, IQR 3-5, range -3-6.

The MAP median value 73 mmHg, IQR 67-80. The blood loss range was 50-1000ml, median value 420 ml; the median of Hb was 11.52 g/dl IQR 10.31-13.00, range 7-14.

This anesthetic management to obtain reduction of CVP and of massive volume blood loss seems appropriate in this type of surgery, where the control of bleeding is crucial for short and long-term outcome of the patients.

### Biography

- Master in Health Economics at the Bocconi University, Milan, Italy
- Member of National Health Care Agency
- Author of numerous publications at both a national and international level in Anaesthesia / Intensive Care and Health Economics
- Director of Department of Anaesthesia and Intensive at San Filippo Neri Hospital, Rome, Italy
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- Chairman, Italian Society of Intravenous Anaesthesia, Rome, Italy
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- Co Chair, Master in Health Economics of the National Academy of Medicine, Bologna, Italy
- Member of Scientific Committees for numerous national and international scientific journals (Cochrane Collaboration)
- Chairman, Ethics Committee for Lazio Regional Authority, Rome, Italy
- Board Member of Quality and Safety Commission, World Federation of Society of Anaesthesia
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