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An evaluation of protocol requirement administered with a target controlled infusion (TCI) device in an Indian population using bispectral index (BIS) monitoring during total intravenous anaesthesia (TIVA).

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OBJECTIVES

Most research regarding infusion protocols for intravenous anaesthesia drugs have been formulated on western population. Due to pharmacogenetic considerations these studies may apply to Indian populations. The study was undertaken to study the applicability of standard target controlled infusion protocols, to Indian patients undergoing surgery under general anaesthesia.

METHODOLOGY

One hundred patients were anaesthetized by administration of total intravenous anaesthesia using a combination of propofol, atracurium and sufentanil. Propofol was administered using a Target Controlled Infusion device with a set target blood level of 4 μ /mL. Standard dose boluses of atracurium and sufentanil were followed by infusions. Depth of anaesthesia was monitored by using Bispectral Index Monitoring. BIS values during the phase of maintenance were grouped into three classes indicating inadequate anaesthesia, adequate anaesthesia, and overmedication. The time BIS values remained in these categories was compared with literature published earlier from western sources. The rate of propofol delivery was adjusted to keep BIS values between 45 and 60. Vital parameters were monitored.

RESULTS

The result were statistically analysed. BIS value were comparable between western and Indian population.

RECOMMENDATIONS

It was concluded that the infusion protocols on western population were equally effective for the Indian population.