Severe transient hemiplegia after general anaesthesia for prostatectomy

Editor—Postoperative hemiplegia after general anaesthesia for non-cardiovascular procedures is devastating. It is rare with an incidence ranging from 0.08% to 0.7%.1–3 It has been associated with a mortality rate up to 26%.2 However, the outcome is unpredictable, ranging from death to full recovery in several hours. We present a patient who underwent urological procedure and developed a new post-anaesthesia left hemiplegia. It dramatically resolved in 7 h.

An 81-yr-old white male (73 kg, 165 cm) underwent elective radical prostatectomy for carcinoma. He had a well-controlled type II diabetes and hypertension. He was a two pack-per-day smoker for 15 years. Physical examination, laboratory tests, and ECG were unremarkable. He was clear and oriented. His daily activities were normal without neurological signs. ASA classification was II.

The trachea was intubated after induction with propofol 150 mg and mivacurium 10 mg i.v., followed by ventilation with sevoflurane/nitrous oxide/oxygen mixture. Vecuronium and fentanyl were used for anaesthesia maintenance. During the operation, all the monitored variables were within the normal range. Four units of packed red blood cells were used for 1100 ml blood loss.

On recovery, after 5 min in post-anaesthesia care unit (PACU), it was noted that he had a left side hemiplegia. Neurological examination revealed total flaccid left side and normal right. The Babinski sign was positive on the left. Acute brain ischaemia was suspected. Immediate bilateral carotid duplex sonography and urgent angiography did not reveal any new lesion. The only positive finding was focal brain infarct which was interpreted as old lesion (Fig. 1).

At 5 h after operation, follow-up in the intensive care unit showed improvement, and at 7 h, there was complete recovery. With multi-specialities participation, he was subsequently discharged home 3 days later. A 1 month follow-up including diffusion-weighted imaging showed no abnormality.

Although rare, brain damage caused by anaesthesia for non-vascular surgery can be severe and may be unavoidable.1–4 Previous reports suggest that perioperative stroke occur most commonly in the later postoperative period and are rare intraoperatively or immediately postoperative.2–6

Factors that increase the risk of brain ischaemia include older age, hypertension, cigarette smoking, diabetes mellitus, ischaemic heart diseases, and obesity.4 5 Our patient had no past history of transient ischaemic attack (TIA), but had an old ischaemic lesion on the postoperative CT scans. It is likely that his past neurological deficit symptoms were chronic and vague. General anaesthesia and PCI with stent implantation is now used as a routine treatment for CAD. The immediate period after stent implantation is a high-risk period because the stenotic lesion is transformed into an unstable area due to rupture of its endothelial covering.1 Stent endothelialization may not be complete when patients undergo non-cardiac surgery during this early period; therefore, a dual antiplatelet therapy consisting of aspirin and clopidogrel is mandatory. Acute withdrawal of antiplatelet agents may produce a deleterious rebound effect; excessive thromboxane A2 activity and decreased fibrinolysis have been noted on stopping aspirin.2 Antiplatelet drug withdrawal is more dangerous in the perioperative period. Stopping clopidogrel to allow major surgery during the first 3 weeks after PCI and stenting leads to increased mortality.3 Maintenance of full antiplatelet therapy in the perioperative period seems to reduce this risk.4 In patients undergoing metal stent placement, there were no cardiac complications directly attributable to altered myocardial physiology after discharge up to a period of 14 days.5 Myocardium that has suffered damage due to ischaemia would be at less risk after the placement of a stent than before it. Since our patient had a normal echocardiogram, we postulated that he would not suffer a cardiac event, if the antiplatelet therapy was continued and the surgery postponed until 2 weeks after the stent placement. It has been observed that surgery done after 2 weeks of stent placement has lower risk compared with that before this period in a study involving major cardiac and vascular surgery.6 The problem of excessive bleeding was not expected in our patient as the surgery was to be performed with a tourniquet in place. Maintaining haemodynamic stability was given high priority.

K. N. Saxena*
S. Kumar
B. Taneja
P. Gaba
New Delhi, India
*E-mail: kirtinath@gmail.com

doi:10.1093/brja/aep073
surgery might potentate the focal undetected circulatory perturbations. The brain on the ischaemic side may be more sensitive to sedation and anaesthesia resulting in a differential action between the two hemispheres that persisted to PACU and precipitated a TIA.

Weiwu Pang1 2 *
J. Collins1
Rick Sai-Chuen Wu2
1 Lakeland, USA
2 Taichung, Taiwan
*E-mail: sungfangrong@aol.com


doi:10.1093/bja/aep074

Psoas compartment block for lower extremity surgery

Editor—We read Touray and colleagues’ review of psoas compartment block (PCB) for lower extremity surgery with considerable interest. Although our own practice mirrors the benefits of PCB suggested by their meta-analysis, namely superior analgesia after hip surgery compared with either opioid or ‘3-in-1’ block analgesia, we were surprised by the conclusion that the duration of analgesia after single-injection PCB is limited to the first 4–8 h after operation.

We have recently completed an audit of morphine requirements in the immediate postoperative phase of 100 patients receiving PCB for hip surgery (elective and emergency). Eighty patients did not require any morphine in the post-anaesthesia care unit; 20 required 5–10 mg morphine. Analysis up to 48 h after operation suggests a morphine-sparing effect greater than that suggested, with a mean morphine requirement of 10 mg over this time period.

Our findings are more in line with those reported by Stevens and colleagues, and support the recommendations of the PROSPECT working group’s conclusion that PCB is a valuable technique in the management of analgesia for patients who have undergone total hip arthroplasty. Furthermore, we suggest that the extended duration of single-shot PCB may be of greatest benefit to elderly patients undergoing hip fracture surgery, in whom renal and respiratory co-morbidities may preclude excessive perioperative opioid analgesia—although research remains to be done to support this hypothesis.

R. R. Byreddy*
C. M. Harper
S. M. White
Brighton, UK
*E-mail: raj_byreddy@yahoo.co.uk

Editor—We thank Dr Byreddy and colleagues for their interest in our review and the interesting data presented. In response to the question concerning the duration of analgesia with PCB, it is important to distinguish between pain quantified using a visual analogue scale (VAS) and opioid consumption. Although they are both measures of pain intensity, the two do not necessarily correlate.

To determine the duration of blockade with PCB, it makes more sense to analyse VAS scores as the VAS is a patient-centred outcome and direct measure of analgesia. In our meta-analysis, Figure 1 demonstrates that compared with opioids, single-injection PCB results in lower VAS scores only during first 4–8 h after block injection. A continuous