Anaesthetic techniques for carotid surgery

In the GALA trial (Dec 20, p 2132), all types of regional anaesthesia were grouped as one: “local anaesthesia”. Yet clinical and anatomical studies confirm important differences between simple subcutaneous infiltration, formal “superficial” cervical plexus block, and a deep block. The last two are clinically equally effective, anatomical investigations showing that the so-called deep cervical fascia might not exist as a distinct or impermeable entity as previously supposed. Solutions freely enter the deep space: local anaesthetic placed relatively superficially in the neck will reach the same anatomical sites as that placed more deeply.

However, the deep block results in a consistently higher rate of direct harm owing to the penetrating needle damaging or entering important vessels or even the cerebrospinal fluid. We found this direct complication rate to be 0·25% (vs 0% for superficial cervical plexus block), and, further, a higher conversion rate to general anaesthesia of more than 2% (vs 0·4%). GALA finds an even higher rate of more than 4%. If these instances were confined to deep block, it suggests a perhaps prohibitive complication rate for this method.

The GALA trial results failed to show differences between anaesthetic techniques in terms of cerebral or cardiac outcomes. However, by careful subgroup analysis, GALA might at least help establish which is the safer (and therefore more suitable) regional technique. With efficacy equal, the safety profile will help determine the anaesthetic choice.

I declare that I have no conflict of interest.

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The trial of general versus local anaesthesia for carotid endarterectomy by the GALA group shows no definite difference in outcome between the two techniques. How will this finding affect clinical practice or guide future anaesthetic techniques for carotid endarterectomy?

Local or regional anaesthetic techniques have the advantage that they been in use for more than 50 years and are associated with decreased cost and resource use, better neurological outcomes, and reduced need for shunting; however, surgical drapes over the head and face areas can increase claustrophobic anxiety. In our opinion, whichever anaesthetic technique is chosen, cerebral blood flow should be optimised, cardiac stress minimised, and the risk of ischaemia decreased by maintaining normal to high perfusion pressure.

We are also concerned that there might be some limitations to the trial. First, data on complications after anaesthesia (eg, pain, postoperative nausea and vomiting) were not supplied. Second, the exclusion of high-risk patients clearly reduces the statistical power of the trial. Furthermore, in the local anaesthesia group, the exact number of patients under super or deep cervical-plexus block should be stated.

We declare that we have no conflict interest.

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The General Anaesthesia versus Local Anaesthesia for carotid surgery (GALA) trial did not show a difference in rates of postoperative stroke, myocardial infarction, or death between patients undergoing carotid endarterectomy under local anaesthesia and those undergoing general anaesthesia.

Statins are an essential component in the management of carotid artery disease. For example, a study on patients undergoing carotid endarterectomy under general anaesthesia or cervical block showed that (after multivariate analysis to adjust for demographics and comorbidities) preoperative statin use was associated with a significant reduction in rates of perioperative stroke (odds ratio 0.35, 0.15-0.85; p<0.05) and perioperative death (0.20, 0.04-0.99; p<0.05). Therefore, preoperative statin use in the GALA trial deserves to be mentioned.

We have attended conferences, participated in advisory boards and trials, and given talks sponsored by various pharmaceutical companies (including those that market statins).

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