Conflict of interest

None declared.

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Transversus abdominis plane block for renal transplant recipients

Editor—I read with interest the article on the use of transversus abdominis plane (TAP) blocks in the postoperative pain management of renal transplant patients.¹ I had a few queries for the authors.

(i) Did the authors use ultrasound guidance to perform the block? The use of ultrasound, in addition to helping to better delineate the tissue planes, may conceivably allow the administration of larger volumes of more dilute local anaesthetic, so as to facilitate longer lasting pain relief.

(ii) The authors have used a similar intraoperative analgesic regimen, that is, acetaminophen and morphine in both groups. Did they notice a decrease in the intraoperative use of morphine in the TAP group? Also, will the intraoperative use of morphine in the TAP group be a confounding factor in the postoperative evaluation of pain in this group?

(iii) The authors state that there was no significant difference in pain scores at 24 h. Could that situation be modified by the use of an indwelling TAP catheter that could be topped up at regular intervals?

Conflict of interest

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Systemic effects of topical ophthalmic agents

Editor—We would like to remind readers of the importance of understanding the systemic effects of topical agents used in ophthalmology and alert them to the side-effects of apraclonidine. We describe a case of acute pulmonary oedema after the use of topical apraclonidine during a paediatric day surgery strabismus operation.
A fit and healthy 6-yr-old child (ASA I) underwent elective day surgery for squint correction surgery and received a standard TIVA anaesthetic with propofol and remifentanil. During the surgery, apraclonidine was applied directly to the eye muscles to produce vasoconstriction to limit the use of surgical diathermy, which has the potential to cause scarring of the eye muscle.

Within a few minutes, there was a rapid increase in systolic arterial pressure up to 200 mm Hg, and we noticed that the child was pale peripherally with strong slow radial and pedal pulses. This was followed by fine crepitations on chest auscultation and oxygen saturations decreased to 80%, despite increasing the $F_{\text{io}_2}$ to 1.0. The LMA was changed to a tracheal tube and positive pressure ventilation was continued. The propofol infusion rate was increased to help control the hypertension along with i.v. furosemide and oxygenation continued to improve over the next 2 h at which point the child was awakened and the trachea extubated. She remained drowsy but rousable over the next few hours despite having received no long-acting anaesthetic or sedative agents and was fully alert the following day.

Apraclonidine, which is widely used in the treatment of glaucoma, is also used as a vasoconstrictor in squint surgery. It is a potent, relatively selective, $\alpha_2$-adrenergic receptor agonist derived from clonidine. It is more polar and less lipophilic than clonidine, which decreases the potential to cross the blood–brain barrier and so cause less hypotension. Clonidine was initially intended for use as a locally acting decongestant due to its potent peripheral vasoconstrictor action, but was found to be a potent hypotensive agent and so approved for the treatment of hypertension. This paradoxical effect is due to having both central and peripheral actions. Centrally, it is an agonist on the $\alpha_2$-adrenergic receptors, inhibiting the sympathetic vasoconstrictor centres and having a negative feedback on noradrenaline release so inducing hypotension. While peripherally it agonizes the postganglionic $\alpha_1$- and $\alpha_2$-adrenergic receptors producing pronounced vasoconstriction, increasing venous return, and causing hypertension.

A sudden increase in peripheral vasoconstriction would explain the hypertension and a relative bradycardia in our case. Pulmonary oedema is rare in children, but has been described after topical phenylephrine, which is also a potent adrenergic agonist. The increased workload of the heart against an increased systemic vascular resistance may cause an increase in left ventricular pressures and left ventricular dysfunction leading on to cause a cardiac congestion picture, presenting with pulmonary oedema and respiratory compromise.

Overdoses of apraclonidine and clonidine have both been reported previously. The most common presentation is with its central $\alpha_2$-agonistic effects of hypotension and sedation, but overdoses have also been described presenting with hypertensive crises. These different presentations are presumably due to the paradoxical effects; at lower concentrations, hypotension related to central $\alpha_2$-agonistic effects is seen, whereas at very high concentrations, hypertension occurs from a predominance of peripheral agonistic activity. Topical agents are often of a higher strength than i.v. agents. Each vial of apraclonidine eye drops contains 0.25 ml of a 1% solution giving a potential total dose of 2.5 mg or for a 20 kg child a dose of 125 $\mu$g kg$^{-1}$. The i.v. dose of clonidine is 1–2 $\mu$g kg$^{-1}$. Our experience reminds us that both surgeons and anaesthetists need to be aware of the systemic effects of topical agents.

**Conflict of interest**

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**Impact of H1N1 vaccination on the rate of cancellation of daycase elective surgery in children**

Editor—In 2007, our unit introduced a guideline to assist the staff in timing admission for daycase surgery and anaesthesia around routine childhood vaccinations. This measure was taken to reduce the disruption to the planned admission process. Before the implementation of this guideline, surgery was cancelled by some anaesthetists if the child had been recently exposed to a vaccine and conducted as scheduled by other anaesthetists. This led to a variable cancellation rate, inefficient use of theatre and day ward resources, dissatisfaction among staff caring for patients, and most importantly, a poorer experience for children and guardians attending the hospital. The guideline was formed after a review of the available literature on the subject and current practices in other children’s hospitals around the world. It was decided that surgery was to be scheduled at least 1 week after vaccination with an attenuated vaccine and at least 1 month after administration of a live attenuated viral vaccine. It was noted at that time that there was a paucity of strong evidence to inform clinicians on the effect of vaccinations on children undergoing general anaesthesia. Information given to parents verbally and in leaflet form was modified to reflect this change in practice, and the guideline was successfully introduced. There was an early and sustained decrease in cancellation on the morning of surgery for this reason.

Using prospectively collected admission data from the past 2 yr (ongoing established audit in our department), we