Patients were allocated to three groups by random
and E-DA Hospital/I-Shou University, Taiwan. The
anaesthesia in Kaohsiung Municipal Min-Sheng Hospital
in 60 women undergoing Caesarean delivery under spinal
analgesic efficacy of COX-2 inhibitors after Caesarean
the only available COX-2 inhibitor. The pre-emptive
potential myocardial and stroke risks, celecoxib remains
valdecoxib were removed from the market because of
use in the postoperative Caesarean delivery setting. 2
effects on breast-feeding infants raise concerns about their
post-Caesarean use because they have less platelet inhi-
inhibitors are, thus, potentially attractive alternatives for

1 Cooper GM, McClure JH. Anaesthesia chapter from Saving
Mothers Lives: reviewing maternal deaths to make pregnancy safer. Br J
Anæsthes 2008; 100: 17–22
3 National Institute for Health and Clinical Excellence. Ultrasound
Guided Catheterisation of the Epidural Space. January 2008
4 Bhattacharya S, Campbell DM, Liston WA, Bhattacharya S. Effect
of body mass index on pregnancy outcomes in nulliparous
women delivering singleton babies. BMC Public Health 2007; 7: 168
5 DeVader SR, Neeley HL, Myles TD, Leet TL. Evaluation of
gestational weight gain guidelines for women with normal pre-
6 Grau T, Leipold RW, Conradi R, Martin E. Ultrasound control for
25: 766–71
7 Kawaguchi R, Yamauch M, Sugino S, Tsukigase N, Omote K,
Namiki A. Two cases of epidural anesthesia using ultrasound
imaging. Masui 2007; 56: 702–5
doi:10.1093/bja/aen112

Does celecoxib have pre-emptive analgesic
effect after Caesarean section surgery?

Editor—The addition of non-steroidal anti-inflammatory
drugs (NSAIDs) to a postoperative Caesarean analgesic
regimen could improve postoperative pain and reduce
opioid analgesic requirements. 1 The potential maternal
side-effects (e.g. antiplatelet and gastrointestinal) and
effects on breast-feeding infants raise concerns about their
use in the postoperative Caesarean delivery setting. 2
Cyclo-oxygenase-2-specific inhibitors (COX-2 inhibitors)
are effective postoperative analgesics, decreasing pain
scores and analgesic consumption after surgery. 3 COX-2
inhibitors are, thus, potentially attractive alternatives for
post-Caesarean use because they have less platelet inhib-
tion compared with NSAIDs. 3 As both rofecoxib and
valdecoxib were removed from the market because of
potential myocardial and stroke risks, celecoxib remains
the only available COX-2 inhibitor. The pre-emptive
analgesic efficacy of COX-2 inhibitors after Caesarean
section setting has not been evaluated.

We have conducted a randomized, double-blind,
placebo-controlled study to evaluate the analgesic efficacy
of administering celecoxib, either before or after operation
in 60 women undergoing Caesarean delivery under spinal
anaesthesia in Kaohsiung Municipal Min-Sheng Hospital
and E-DA Hospital/I-Shou University, Taiwan. The
patients were allocated to three groups by random
numbers. Patients in the preoperative group received
celecoxib 400 mg 30 min before anaesthesia and a placebo
tablet after wound closure (preop celecoxib group). Patients
in the postoperative group received a placebo
tablet 30 min before anaesthesia and celecoxib 400 mg
after wound closure (postop celecoxib group) and patients
in the control group received a placebo tablet 30 min
before anaesthesia and after wound closure (control
group). Wound closure completion was considered as time
0. Patient characteristics, ephedrine dose, and duration of
surgery were similar for the three groups. Total morphine
consumption for the 24 h after surgery was significantly
reduced in both the preop [13 (6.2) mg] and the postop
celecoxib groups [12 (5.4) mg] compared with the control
group [27 (7.2) mg] (P<0.05). Between 3 and 24 h after
surgery, the patient-controlled analgesia morphine dose
was also significantly reduced in the preop and postop cel-
ceoxib groups compared with the control group (P<0.05).
The time to first analgesic demand was significantly later
(P<0.05) in the preop but not in the postop celecoxib
groups in comparison with the control group [421 (92)
min, 334 (56) min vs 261 (46) min]. Between 3 and 24 h after
surgery, visual analogue scale pain scores during move-
ment at 6 and 12 h after surgery were statistically lower in
both celecoxib groups. No patient had severe sedation. No
patient required bladder catheterization. The incidence of
moderate sedation, moderate bladder dysfunction, and
nausea and vomiting was similar for all groups. In
summary, administration of celecoxib before Caesarean
section did not provide pre-emptive analgesia. There was a
trend towards improved analgesia immediately after
surgery with preoperative celecoxib administration.
Perioperative celecoxib administration improved post-
operative analgesia during the first 24 h, without increas-
ing adverse effects.

NSAIDs have been shown to improve postoperative pain
relief in Caesarean section. 5 Studies comparing COX-2
inhibitors with NSAIDs demonstrated similar analgesic
efficacies and opioid-sparing after surgery in non-
obstetrical settings. 5 Although we compared celecoxib
with placebo and did not compare celecoxib with
NSAIDs, celecoxib does not provide clinically significant
pre-emptive analgesia after Caesarean section. However, it
improves postoperative analgesia, reduces morphine
required by patients, and does not increase adverse effects.
The reduced potential risk of haemorrhage in the mother
and the breast-feeding infant with COX-2 inhibitors com-
pared with NSAIDs is, theoretically, an advantage in
obstetric patients. 6 In addition, COX-2 inhibitors should
be safe during breast-feeding, as there is minimal drug
transfer to the infant. 7

Funding
This work was supported, in part, by National Science
Council Grant NSC 95-2314-B-214-011.
W.-P. Fong
L.-C. Yang
J.-I. Wu
H.-S. Chen
P.-H. Tan*
Kaohsiung, Taiwan
*Email: tanphphd@yahoo.com.tw

Statins and sepsis

Editor—We congratulate Gao and colleagues1 on the timely review of the place of statin therapy in sepsis. We agree that further prospective clinical research is required to evaluate the potential benefits and limitations of statin use in patients with sepsis and that must specifically address both current statin users and patients not taking statin therapy.

Stopping established statin therapy in patients with acute coronary disease,2 recent major vascular surgery,3 or recent stroke4 has been suggested to be associated with worse outcomes. This has not been specifically assessed in patients with sepsis, although a retrospective study5 in patients with bacteraemia showed continuing statin use after bacteraemia was associated with significantly reduced mortality. These findings suggest that stopping concurrent statin therapy in sepsis (as recommended by current prescribing guidelines) may be associated with increased mortality. These findings require further evaluation in an appropriate prospective randomized trial.

Although the available evidence suggests that the potential for statins as adjuvant therapy in sepsis should be tested, we believe that an international multicentre trial with mortality as an endpoint would be premature. Preliminary data on absorption, pharmacokinetics, physiological effects, and possible adverse effects in critically ill patients with sepsis are required.

With the support of the Australian and New Zealand Intensive Care (ANZIC) Clinical Trials Group and the ANZIC Research Centre, we have commenced an Australian National Health and Medical Research Council (NHMRC)-funded multicentre phase II trial in 2007. The STATInS trial (ACTRN 1260700028404) (www.anzctr.org.au/trial_view.aspx?ID=81692) is a phase II, randomized, placebo-controlled study of the safety, pharmacokinetics, and effect on inflammatory marker levels of atorvastatin in intensive care patients with severe sepsis. This trial is currently underway in more than 14 intensive care units in Australia and New Zealand and we hope the results will provide a platform to plan future trials examining mortality as an endpoint.

P. S. Kruger*(on behalf of The STATInS Investigators)
Brisbane, Australia
*Email: peter_kruger@health.qld.gov.au

A wireless remote controlled infusion pump for anaesthesia during magnetic resonance imaging

Editor—The use of ferromagnetic devices in magnetic resonance imaging (MRI) suites represents a life-threatening hazard for patients and healthcare providers.1 2 In the past, the lack of compatible infusion pumps has led to the use of conventional pumps, placed outside the MRI scanner with long tubing for drug delivery.3 4 These long infusion lines can be trapped in the closed door3 and cause false flow rates.5 The MRidium™ (Iradimed Corp, USA) is a new MRI-compatible infusion pump with a wireless