Correspondence
determine whether a trial of steroids is appropriate. There
is increasing evidence\(^1\)\(^2\)\(^3\)\(^4\)\(^5\)\(^6\) that many patients respond to
steroid replacement, and a 24–48 h trial of hydrocortisone
should be considered in all patients with prolonged vaso-
pressor dependent shock.

J. D. Knighton
Salisbury District Hospital NHS Trust
Salisbury, UK

T. E. Woodock
M. Hough
Southampton Hospital NHS Trust
Southampton, UK

Editor,—Thank you for the opportunity to reply to Knighton,
Woodcock and Hough. In our case report we presented
three patients who were identified as having adrenocortical
insufficiency based on an inadequate response to the short
synacthen test. We were alerted to the possibility of adrenal
failure when an inappropriate amount of inotropic support
was required. Similarly, Dr Knighton’s patients had pro-
longed vasopressor-dependent shock. However, four of his
patients had an inadequate response to corticotropin testing.
These patients benefited from a trial of physiological
steroids.

We agree with Knighton, Woodcock and Hough that it
is possible that the abnormality may lie in altered receptor
function or glucocorticoid resistance rather than an abnor-
mality of the adrenal axis. We also agree that a trial of
hydrocortisone should be considered in all patients with
prolonged vasopressor-dependent shock. We suggest that
baseline cortisol concentrations and synacthen testing are
worthwhile to assess hypothalamic–pituitary–adrenal axis
dysfunction vs steroid unresponsiveness as these are differ-
ent injuries with different long-term outcomes.

M. Duggan
Department of Anaesthesia
Mater Misericordiae Hospital
Dublin, Ireland

Local anaesthesia for routine ocular surgery
Editor,—We read with interest the correspondence from
Dark\(^1\) and Mawer and Coombs\(^2\) on the question of local
anaesthesia for cataract surgery. Our hospital now carries
out 96% of cataract surgery under single quadrant sub-
Tenon anaesthesia.\(^3\) There is a rapid learning curve for new
trainees; manual dexterity and skill are established quickly
and there is no difference in quality of block whether
performed by trainee or consultant. The complication rate
is low, and is mainly subconjunctival haemorrhage. No
operation has had to be abandoned because of complications
related to the block.

The block is well tolerated by patients, many of whom
would not be suitable for day-case general anaesthesia. We
believe the block is safe for anaesthetists to perform without
an operating microscope. The ‘gold standard’ for identifying
the sub-Tenon space may well be the operating microscope,
but our results show this to be unnecessary in practice.

S. R. Price
C. D. Miller
Department of Anaesthetics
Stobhill Hospital
Glasgow, UK

Editor,—Thank you for the opportunity to respond to Price
and Miller regarding local anaesthesia for routine ocular
surgery. That they can achieve such a high percentage of
cataract surgery under sub-Tenon’s block is to be congratu-
lated. Their extensive use of the block illustrates the
difference in practice in different regions of the country.
Many authors now advocate the use of local anaesthetic
techniques as opposed to general anaesthesia for cataract
surgery.\(^1\)\(^2\)\(^3\) The medical characteristics of the patient popula-
tion undergoing such surgery render them particularly
suitable to benefit from a simple, safe and acceptable\(^4\)–\(^7\)
local anaesthetic technique. The single quadrant sub-Tenon’s
block approaches the ideal for such a technique.

There will always, however, remain groups of patients
in whom this or any other local anaesthetic technique would
not be appropriate, for example many paediatric patients,
those who are unable to cooperate fully, those who cannot
lie flat or those who have an intractable cough.

I would agree with Price and Miller’s points that there
is a steep learning curve and that the required skill and
dexterity are established quickly; this is certainly the experi-
ence at our hospital. I would also agree that an operating


Correspondence

microscope and skill in its use are not required for performance of this block.

A. Dark  
Aberdeen Royal Hospitals NHS Trust  
Aberdeen, UK

1 Rubin AP. Anaesthesia for cataract surgery—time for a change?  
Anaesthesia 1990; 45: 717–18
2 Strunin L, Lewis P. Anaesthesia for cataract surgery—time for change.  
Anaesthesia 1991; 46: 148
3 Rassam S, Thomas HF. Local anaesthesia for cataract surgery.  
4 Stevens JD. A new local anaesthesia technique for cataract extraction by one quadrant sub-Tenon’s infiltration.  
Anesthesia Intensive Care 1996; 24: 241–4
6 Roman SJ, Chong Sit DA, Boureau CM, Auclin FX, Ullern MM.  
Sub-Tenon’s anaesthesia: an efficient and safe technique.  
7 Buys YM, Trope GE. Prospective study of sub-Tenon’s versus retrobulbar anaesthesia for inpatient and day-surgery trabeculectomy.  
Ophthalmology 1993; 10: 1585–8

Autologous blood transfusion

Editor,—We read with interest the case report by Rees and Boheimer on autologous transfusion of blood possibly contaminated with amniotic fluid.1 They question if their practice was sound under the circumstances (i.e. in an anaemic Jehovah’s Witness). In spite of the fact that amniotic fluid may cause amniotic fluid embolism, it is not always toxic; its toxicity is more probably related to its meconium content.

Over 40 yr ago, Tio from Peru deliberately infused up to 500 ml of amniotic fluid into humans of both sexes for therapeutic purposes.2,3 He observed normalization of prolonged coagulation times after administration of amniotic fluid; 6% of his patients had intolerance reactions, but there were no deaths. Although the composition of the amniotic fluid is not mentioned, it is likely that he avoided the use of meconium-contaminated fluid.

In a mini-pig model, we showed that meconium-contaminated amniotic fluid in quantities of approximately 3 ml kg\(^{-1}\) caused severe coagulatory and cardiorespiratory abnormalities. Such effects would be especially unwanted in an anaemic Jehovah’s Witness patient. Clear amniotic fluid (meconium-free) in quantities up to 10 ml kg\(^{-1}\) caused only minor alterations in the coagulation system.4,5

As cell savers wash out fluids (including amniotic fluid) in the process of preparing autologous red cell concentrates, there is only a slight chance of coagulatory, circulatory or respiratory abnormalities after reinfusion of such concentrates in cases where sufficient homologous blood is not available or not acceptable to the patient.

We feel that the essential problem limiting the use of autologous blood in obstetrics is not whether contamination with amniotic fluid occurs, but whether meconium is present.

The haemoglobin nadir in this case (3.7 g dl\(^{-1}\)) was quite low and would have warranted publication even without the use of autologous blood possibly contaminated with amniotic fluid. It should be noted, however, that this is not the lowest haemoglobin concentration reported. Two Jehovah’s Witnesses survived a haemoglobin concentration of 1.4 g dl\(^{-1}\) without transfusion.6–8

W. H. Maleck  
Department of Anaesthesia  
Klinikum Ludwigshafen, Germany

G. A. Petroianu  
Institute of Pharmacology and Toxicology  
University of Heidelberg at Mannheim, Germany

2 Tio AG. Contribución al estudio y empleo del liquido amniótico.  
Rev Peruana Obstet 1955: 3: 84
3 Tio AG. Clinical use of amniotic fluid. JAMA 1956; 161: 996
Anaesthesiology 1995; 83: A927
5 Petroianu G, Altmannsberger SHG, Maleck WM, et al. Meconium  
and amniotic fluid embolism: effects on coagulation in pregnant mini-pigs.  
Crit Care Med 1999; 27. (in press)
6 Brimacombe J, Skippen P, Talbut P. Acute anaemia to a haemoglobin of 14 g l\(^{-1}\) with survival.  
7 Teßmann R, von Lu¨pke U. U¨berleben einer schwersten Blutungsanamie bei einer Zeugin Jehovas.  
Anaesesthol Intensivmed Notfallmed Schmerzther 1996; 31: 501–4
8 Viele MK, Weiskopf RB. What can we learn about the need for  
transfusion from patients who refuse blood? The experience with  
Jehovah’s Witnesses.  
Transfusion 1994; 34: 396–401