The Anaesthesia Science Viva Book
SECOND EDITION

Clinical science as applied to anaesthesia, intensive therapy and chronic pain
A guide to the oral questions

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# Contents

*Preface to the Second Edition*  
*Preface to the First Edition*  

## 1 Advice on answering clinical science viva questions  

### 2 Anatomy and its applications  

- The cerebral circulation  
- The internal jugular vein  
- Ocular anatomy  
- The autonomic nervous system  
- The trigeminal nerve  
- The nose  
- Sensory nerve supply to the face  
- Cervical plexus  
- The larynx  
- Innervation of the larynx  
- The anatomy of the trachea and bronchi  
- Surface anatomy of the neck (percutaneous tracheostomy and cricothyroidotomy)  
- The stellate ganglion  
- Myocardial blood supply  
- Myocardial innervation  
- Intercostal nerves  
- The diaphragm  
- The liver  
- The coeliac plexus  
- Blood supply to the spinal cord  
- The lumbar sympathetic chain  
- Innervation of the inguinal region  
- The brachial plexus  
- The ulnar nerve  
- The radial nerve  
- The median nerve  
- The antecubital fossa  
- Arterial supply of the hand  
- Anatomy relevant to subarachnoid (spinal) anaesthesia  
- The extradural (epidural) space  
- The sacrum  
- The femoral triangle
Contents

The femoral nerve 91
The sciatic nerve 93
Sensory innervation of the foot 95
Cross-sectional areas of interest: eye, neck and lumbar region 97

3 Physiology 101
Pneumothorax 101
Central venous pressure and cannulation 104
Fluid therapy 107
Compensatory responses to blood loss 110
Control of breathing 112
Apnoea and hypoventilation 116
Compliance 118
The failing lung 120
Bronchomotor tone (asthma) 123
Preoperative assessment of cardiac function 125
Oxygen delivery 127
Oxygen–haemoglobin dissociation curve 129
Hyperbaric oxygen 132
Oxygen toxicity 134
One-lung anaesthesia 136
Pulmonary oedema 138
Pulmonary hypertension (hypoxic pulmonary vasoconstriction) 141
Intracranial pressure 143
Cerebral blood flow 147
Intraocular pressure 150
The neuromuscular junction 153
Physiological changes of late pregnancy relevant to general anaesthesia 156
Non-obstetric surgery in the pregnant patient 159
Circulatory changes at birth (congenital heart disease) 161
Physiology and clinical anatomy of the infant and neonate 164
Postoperative nausea and vomiting 168
Obesity 170
Physiology of ageing 172
The ‘stress response’ to surgery 174
The glucocorticoid response to surgery 176
Adrenaline (epinephrine) 178
5-Hydroxytryptamine (serotonin) 180
Nitric oxide 183
Plasma proteins 185
Thyroid function 186
Nutrition 189

4 Pharmacology 193
Chirality 193
Propofol 195
Ketamine 197
Thiopental and etomidate 199
Inhalational agents: comparison with the ideal 202
Nitrous oxide 205
Neuromuscular blocking drugs 209
Suxamethonium 211
Opiates/opioids 213
Local anaesthetics: actions 216
Local anaesthetics: toxicity 220
Local anaesthetics: alkalization 223
Bupivacaine, ropivacaine, lidocaine and prilocaine 225
Spinal adjuncts to local anaesthetics 228
Induced hypotension 230
Clonidine 233
Anti-arrhythmic drugs 235
β-adrenoceptor blockers 238
Anti-hypertensive drugs and anaesthesia 241
Hypotension and its management 243
Inotropes 246
Drugs used in the treatment of nausea and vomiting 249
Drug overdose: prescribed and therapeutic drugs 251
Recreational drugs and drugs of abuse 253
Drugs affecting mood 256
Drugs affecting coagulation 258
Cyclo-oxygenase (COX) enzymes 262
Magnesium sulphate 265
Tocolytics (drugs which relax the uterus) 266
Drugs which stimulate the uterus 268
Target-controlled infusion (TCI) 270
Conscious sedation 273
Drugs used to treat diabetes mellitus 275
Bioavailability 277
Design of a clinical trial for a new analgesic drug 280

5 Physics, clinical measurement, equipment and statistics 283
Depth of anaesthesia 283
Evoked potentials 287
Pulse oximetry 288
Measurement of CO₂ 290
The fuel cell (oxygen measurement) 293
Supply of medical gases 294
The anaesthetic machine 296
Flowmeters 298
Laminar and turbulent flow 300
Vaporizers 301
Anaesthetic breathing systems 304
6 Miscellaneous science and medicine

Mechanisms of action of general anaesthetics
Jaundice
Latex allergy
Brain stem death testing
Haemofiltration
Blood groups
Complications of blood transfusion
Cytochrome P450
Mitral valve disease
Aortic valve disease
Electroconvulsive therapy
Postpartum haemorrhage
Pre-eclampsia
The complex regional pain syndrome
Diabetic ketoacidosis
Pain pathways
Spinal cord injury
Immunology (and drug reactions)
Sepsis
The arterial tourniquet
Preface to the Second Edition

The emphasis, if not the content, of the Final FRCA science viva is changing. In response to muted criticism that an otherwise good exam has been diminished by a basic science viva that at times seemed to be little more than ‘Primary Lite’, the College has introduced greater clinical focus. This has meant that many of the answers that appeared in the first edition needed some reorientation. Yet, as before, this book’s prime purpose remains to give you a wide range of potential questions presented in a way that is relevant to the exam that you are facing, and organized so that the information is manageable. As before, the introduction still aims to give you some insight into how the clinical science viva works, together with some revised general guidance as to how to improve your chances of success.

The examination questions continue to be divided broadly into the four subject areas of anatomy, physiology, pharmacology and physics, although the increased clinical emphasis can mean that the distinction between the subject areas can be somewhat blurred. The anatomy question on the internal jugular vein, for example, may well include some discussion of the physiology of central venous pressure. Equally, some questions on pharmacology may encompass aspects of physiology with which there is obvious potential for overlap. This means that you may not always find all the necessary information within one single answer, but should find most of it covered in other sections. The basic format of the book remains unchanged, although the content has been updated where appropriate. A new feature of this edition is the inclusion of some illustrations and diagrams which should make the material more accessible.

My family, as always, offered no objection to the project; and, as always, my thanks and love to them for their support. The anatomical drawings were produced by a student who is studying Fine Art at Edinburgh University and who happens to be my eldest son Celyn. To him are due especial thanks.

Simon Bricker
2008
Preface to the First Edition

The Final FRCA examination has a daunting syllabus which is tested by a multiple choice paper, by written short answer questions, by one oral examination in clinical anaesthesia, and finally by another in applied basic clinical science. This book is intended to give you some insight into how the clinical science viva works, along with some general guidance as to how to improve your chances of passing. More importantly it aims to provide you with a wide range of potential questions that contain, nonetheless, a manageable amount of information.

The introduction explains the format of the viva, outlines how the questions are constructed, conducted and marked, and offers some advice about technique. The questions then follow, which are typical of those which have appeared, are divided broadly into the four areas which the exam is designed to cover, namely applied anatomy, physiology, pharmacology and clinical measurement. One section, entitled ‘Miscellaneous Science and Medicine’ includes a number of subjects which do not fall readily into any of the other categories.

You may notice that there is some overlap in content with the companion volume, ‘Short Answer Questions in Anaesthesia’. Where this has happened I have reworked the answers both to give more detail and to focus the topic more specifically towards the oral part of the exam, but a degree of duplication in one or two of the questions is inevitable.

The answers have been constructed to provide you with enough information to pass the viva, but as I have had to be selective in the detail that has been included they do not claim to be complete accounts of the subjects. This means that in some areas you may notice various omissions, but none I hope so egregious that your chances of success will be ruined. Each of the questions is prefaced by a short commentary on the relevance (or otherwise) of the subject that is being asked. There follows the body of the answer to the likely areas of questioning. This is presented mainly in the form of bulleted, but detailed points, which include supporting explanation. These are written in text rather than as lists, because I felt that this format would make the book easier to read. If some of the questions seem long, then it is either because the background information is complex, or because they contain enough material for more than one viva topic.

Even in a structured examination a viva may take an unforeseen course, and so the answers also include some possible directions which the questioning might follow. Although each one is intended to provide background details more than sufficient to allow you to pass, in many cases they are simplified, and it is always possible that some examiners may ask at least part of the question in more depth than can be covered in a book of this size. There are 150 specimen questions in this book, and on the day of the exam you will be asked only four. Odds of about 40 to 1 or less do not provide a huge incentive for study, but I should hope that at least some of the material would be
relevant to your anaesthetic practice. The material that is irrelevant, and there is certainly some, may at least prove of some future use as in due course you guide less experienced colleagues through the FRCA.

I promised my family that I would never again succumb to the temptation of writing a book. I lied. To my wife and three boys, therefore, my love and thanks for their unfailing patience and support.

Simon Bricker
2004