A View From the Head End: Medical Cartoons to Ease the Pain

S. Yentis
TFM Publishing: Shrewsbury, UK, 2003, 128 pp; illustrated
ISBN: 1-903378-42-7; Price £14.95

This is an entertaining collection of cartoons crafted by the pen of Steve Yentis over the past few decades. His drawings range from spontaneous creations scribbled on scraps of paper in-between cases, to more formal drawings which have previously complemented some of the author’s other publications. The sketches are presented in their original ‘warts-and-all’ form, which has preserved a degree of spontaneity in the cartoons, and certainly adds to their overall impact and appeal.

Chapters of the book are loosely dedicated to different areas with titles such as ‘Expensive Scare’, ‘Painful Clinics’ or ‘The Wards Zone’ setting the tone for each section.

As one might expect the majority of this humour is of an anaesthetic nature, and almost unfailingly seems to hit the mark. However, anyone working in theatre will find plenty of this gas-related material will make them smile. As such, I feel that this book would find a welcome home on theatre coffee-room tables and in departmental libraries. It would also make an ideal ‘stocking-filler’ for any anaesthetist.

As the author states on the rear cover, ‘exam candidates may well find the book contributes absolutely nothing to their chances of success’. This selection of cartoons however, did provide this successful exam candidate with some much needed light relief from the misery of revision for the final FRCA, and as such comes highly recommended!

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Peripheral Nerve Blocks and Peri-operative Pain Relief

J. Barrett, D. Harmon, F. Loughnane, B. Finucane, G. Shorten
Elsevier: Cambridge, UK, 2004, 150 pp; indexed, illustrated
ISBN: 0-7020-2717-0; Price £76.00

As a practising anaesthetist with special interest in peripheral nerve blocks and perioperative pain management, I found reviewing this book to be an interesting experience.

The editors of this book have been involved in running cadaver-based workshops on peripheral nerve blocks for the past 4 yr at least. They have also responded to the feedback from these courses. As they state in the preface their aim was to produce a ‘stand-alone, effective educational tool’ and in this I believe they have largely succeeded.

The book begins with a very clear introduction stating the layout of the book, the readership and their view of how best to use the book. There is also a brief history of the development of regional anaesthesia and a look to the future. Chapter 3 deals with the applied anatomy and physiology of the peripheral nerve and pharmacology of local anaesthetics. The illustrations here are very clear and useful as they are throughout the book. The table of the comparative pharmacology of local anaesthetics could have been updated.

The chapter on general indications and contra-indication is comprehensive supported by excellent illustrations of dermatomes, myotomes and osseous innervations. The chapter also deals with the issues of anticoagulation and regional anaesthesia.
Part one of the book concludes with further chapters on complications, safety and materials required. The chapter on peripheral nerve block materials provides a good summary of electrophysiology and the physics involved in nerve stimulation. There are, however, some annoying misprints which could have been eliminated with careful proof reading. For example, Figure 4.1 has two structures marked 5, though no blood vessels or muscles are shown in the figure: the legends for them are shown in the text below and Figure 5.2 has 0.2 min instead of 2 min injection time.

Part two of the book deals with specific nerve blocks. Each chapter follows the same format with indications, contraindications, anatomy, surface anatomy, techniques, adverse effects and a highlighted box with clinical pearls. The book deals with a comprehensive list of peripheral nerve blocks starting from cervical plexus to the ankle and almost everything in between! From my practice, the only block I would have liked to have seen and that was not included was the lithotomy approach for the sciatic nerve.

There are many books on peripheral nerve blocks and all of them describe the blocks in more or less the same manner. What makes this book stand out is the clarity of the illustrations. Each block description is accompanied by photographs of surface markings, cadaver specimen, skeletal structure where required and line diagrams. This book has in it everything required to learn a peripheral nerve block from basic principles to execution of the block.

This book comes with a digital videodisk (DVD) that has contains the illustrations from the book. The DVD also has magnetic resonance images (MRI) showing the spread of local anaesthetics and a video collection that demonstrates surface anatomy and procedure of each block on volunteers. In addition to the resource on the DVD, there is a link to a web site which has review questions on each chapter and all the illustrations.

This book will be a valuable resource for any department of anaesthesia and a must for any department actively involved in teaching regional blocks to the trainees. Trainees in anaesthesia who want one book to learn peripheral nerve blocks would not go wrong with this one.

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**Morbid Obesity: Peri-operative Management**

A. Alvarez (ed)

*Cambridge University Press: Cambridge, UK, 417 pp; indexed, illustrated
ISBN: 1-841101-88-5; Price £70.00 (Hardback)*

My main interest is in obstetric anaesthesia and morbidly obese parturients are not uncommonly encountered on the delivery unit. I enjoyed reading this book edited by an Argentinean doctor who is both an anaesthesiologist and a general surgeon. Despite the emphasis being on bariatric surgery it contained a wealth of useful information relevant to my practice.

The first three chapters covered general aspects of management from the necessity of a multidisciplinary approach through complications to the informed consent process in North America. The latter was fascinating because patients have to take an MCQ on their proposed surgery and pass it before being able to complete and sign the consent form.

The following five chapters examined the pathophysiology of morbid obesity and included highly competent descriptions of the cardiopulmonary effects. I particularly liked the description of obesity as “a volume overload state that produces left ventricular dilatation and secondary or eccentric hypertrophy” in contrast to that of hypertension as a “pressure overload state that predisposes to concentric left ventricular hypertrophy”. When these conditions coexist, as they often do, the hybrid form predisposes the patient to congestive heart failure.

The physiology of laparoscopy in the morbidly obese was well illustrated in Chapter 7 and was written by a Czech surgeon who is expert in the field of bariatric surgery. I was glad to read the important point that there are generally more pronounced cardiopulmonary changes in laparoscopic surgery than in “open” surgery. There were interesting descriptions of the effect of capnoperitoneum in the morbidly obese. It is not at all bad! And there was good advice, such as to minimize the possibility of venous gas embolism, the central venous pressure should be well maintained. I know this from anaesthetising for laparoscopic donor nephrectomy but it is good to be reminded.
The physiology of gastric aspiration was covered in great detail in Chapter 8 and touched upon controversies such as that there is no hard evidence for the effectiveness of cricoid pressure in preventing aspiration. In fact when aspiration has occurred, cricoid had been used in 50% of patients according to one study. The difference between aspiration pneumonia and aspiration pneumonitis is well described.

Chapter 9 starts with the stark statement that: “No randomized controlled trials give irrefutable evidence that preoperative evaluation of the obese patient, even before bariatric surgery, makes a significant difference to patient mortality.” The authors then go on to give very cogent reasons why preoperative assessment is an essential part of the quality of care that such patients receive. There is some repetition of material found in other chapters but this is probably unavoidable in a multi-author tome such as this and does not detract from the readability of the text.

Section 4 of the book examines the perioperative management of co-morbidities. Diabetes is discussed in detail and the point is made that patients requiring 200 units of insulin a day have been cured after gastric bypass and the consequent weight reduction. Twenty per cent of morbibly obese patients have Type 2 diabetes.

Cardiac disease is discussed in Chapter 11 where the important point is made that many obese patients present with angina in the absence of significant coronary artery disease. Measuring blood pressure can be difficult because of the conical shape of the upper arm. Useful advice was given on how long to wait before elective surgery in patients who have had percutaneous coronary intervention with stenting, namely 4–6 weeks. Most perioperative myocardial infarctions are not associated with ST elevation. If beta-blockers are used intraoperatively to reduce myocardial oxygen demand, they should probably be used before surgery and in the postoperative period when the risk of infarction is at its greatest.

Chapter 12 deals with deep venous thrombosis prophylaxis and the prevention of fatal pulmonary embolism. More than 50% of the US population is overweight with a body mass index (BMI) > 25. Without prophylaxis 25% of general surgery patients would develop deep vein thrombosis. Mechanical devices such as vena cava filters, elasticated stockings and intermittent pneumatic compression were discussed. The relative merits of anticoagulation with low dose unfractionated heparin vs. low molecular weight heparin were also analysed.

Surgical antibiotic prophylaxis to prevent surgical site infection was discussed in Chapter 13. Use of gloves by anaesthetic personnel should be a universal basic standard as obese patients are more prone to infection. The interval between IV administration of antibiotics and surgical incision should be 30–60 min, except for caesarean when the drug is given after delivery of the baby.

The last chapter in Section 4 deals with renal dysfunction and its prevention. It is more common after the following types of surgery: cardiac, aortic aneurysm, major trauma or burns, biliary tract and transplantation (liver, kidney and heart). The chapter ends with the comment that there is no evidence validating the idea of pharmacologically converting oliguric to non-oliguric renal failure. However, most physicians will attempt this.

Section 5 deals with pharmacology in two chapters. The first is by a Belgium group led by Professor Struys who gave an excellent review on how to calculate dosage regimens for anaesthetic drugs in morbibly obese patients. Propofol induction should be based on ideal body weight but maintenance on total body weight. He makes the important point that more studies are needed to optimise propofol target-controlled infusions in morbibly obese patents. Suxamethonium dosage is based on total body weight whereas atracurium is based on actual body weight, and vecuronium, rocuronium and remifentanil on ideal body weight. The authors make the point that volatile agents such as sevoflurane and desflurane are ideal because no weight correction is necessary. All this was extremely useful information.

The following chapter by the editor was devoted to remifentanil and he quotes Professor Kenny as saying that the half-life of the drug is context-insensitive. The duration of infusion does not matter because of the unusual esterase metabolism that gives it a very short half-life. Practical advice on dose reduction in the elderly by a third and in those on beta-blockade by a half was given. Difficult intubation occurs in 13% of morbibly obese patients so using an infusion of remifentanil at 0.1µg kg⁻¹ min⁻¹ during awake intubation can be used to make tube toleration more comfortable.

Section 6 was devoted to monitoring. Electrographical (ECG) changes in the morbibly obese were reviewed and reasons for the development of serious arrhythmias discussed. The chapter on respiratory monitoring had the wrong definition of morbid obesity (BMI > 31) in the introduction. According to the World Health Organisation morbid obesity does not occur until BMI > 40. The chapter on central nervous system (CNS) monitoring using Spectral Edge Frequency or Bispectral Index did not convince me that my hospital should go and buy some of these monitors at the present time, although the concept of avoiding over dosage or awareness in the morbibly obese is obviously very attractive.
Section 7 examined intraoperative management. Chapter 20 was devoted to positioning the morbidly obese patient prior to surgery and was well illustrated with useful photographs. The importance of avoiding pressure sores, nerve injury and compartment syndromes was emphasized. The next chapter returned to the fundamental issue of airway management – more of an art than science. It was reassuring to learn that rapid sequence induction was an acceptable technique rather than having to resort to awake fibreoptic intubation in all morbidly obese patients.

The next chapters contrasted the use of inhalational anaesthesia with total intravenous anaesthesia. My preference is always to keep things simple and I tend to use sevoflurane with remifentanil in morbidly obese patients because the Diprifusor™ has an upper weight limit of 150 kg and working out lean body mass with complex formulas is not to my taste. The author recommends the use of BIS™ monitoring as economically sound in reducing the amount of propofol used.

The final chapter of this section concerned the management of the obese parturient. There is a useful diagram showing Blass’s line (horizontal connecting the apices of the bilateral fat pads) to illustrate epidural needle placement in the low thoracic region in the morbidly obese. Sensible advice was given and the sitting position was recommended for neuraxial blockade.

The last few chapters covered postoperative care. Chapter 25 looked at recovery management and sensible extubation criteria were outlined along with the crucial point that the upper body should be elevated 30–45 degrees before removing the endotracheal tube. The chapter on respiratory management included the very important warning that upper airway topical anaesthesia may induce airway obstruction in obese patients with sleep apnoea. Management of intensive care, nursing and postoperative analgesia were also competently discussed.

Overall this work is an immensely important contribution to the state of the art and I would recommend that all anaesthetists should read it, particularly those that have an interest in bariatric surgery.

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