

Book Reviews

Pediatric Critical Care Nursing. K. W. Vestal (ed). John Wiley & Sons Ltd., 1981, £ 12.80

The subject matter of this book is for those nurses caring for children in intensive care units, long overdue. The book is written by nurses and aims to consolidate information from many sources to provide a comprehensive guide for students, trained nurses and nurse teachers.

Chapter I gives a brief summary of the differences encountered in the pediatric intensive care unit. It reinforces the thoughts of all pediatric nurses and reminds those who are not registered sick children nurses of the important aspects of caring for the sick child and his family.

The main text of the book begins with psychosocial care. In an intensive care setting it is easy to let technology take priority. To understand the psychological trauma that can result from hospitalisation the nurse must have a basic understanding of the psychosocial development of children. This is written briefly and divided into relevant age groups. However the third chapter *Stress: Child, Family and Staff* repeats many of the points made in Chapter II. Consequently they could be combined to give a less disjointed text.

That the intensive care nurse experiences stress is a recognised factor. The section on the causes of stress and how to cope with it is well written and offers comfort to those who have experienced such stress by learning that it is commonplace. It also provides useful information for those new to intensive care situations.

Chapter IV, *Initial Assessment* gives detailed information on the causes of abnormalities when recording vital signs and generally observing the child. The photographs emphasise the importance of accurate recordings.

Fluid Electrolytes and Nutrition is probably of use to both medical and nursing staff. It emphasises the nurse's role in monitoring nutritional status and many pages are dedicated to parenteral nutrition. Parenteral nutrition, due to the potential hazards, should only be commenced when all other methods of feeding have proved impractical or unsuccessful. No reference is made to the use of manufactured milk preparations, nasogastric or naso-jejunal feeding, and the importance of continuing to feed expressed breast milk to the breast-fed child.

To nurse a child attached to a ventilator or monitoring equipment the nurse must have a basic understanding of the principles and pitfalls. Chapter VI aims to acquaint the nurse with these principles and states that instrumentation augments the nursing care but does not replace the nurse. Unfortunately the paragraphs on ventilators, although relevant, refer to ventilators not commonly used in this country and much is repeated in a later chapter. There is also no reference to observation and causes of troubleshooting. However the information regarding invasive monitoring and infusion pumps contains much useful and practical information.

Every book on intensive care needs a chapter on resuscitation; but for nursing purposes this contains too much detail and the drugs listed are naturally those in common use in the USA. It is therefore too easy for the British nurse to skim through much of this as irrelevant and in doing so miss some of the relevant information.

The following chapters discuss specific diseases and problems. Nursing observations are included in each paragraph but specific nursing management is headed separately. Basic nursing care has not been forgotten, e.g. the importance of skin care for the child with congestive heart failure.

The use of intracranial pressure monitors in children is a relatively new development in this country and I found this section particularly useful.

The penultimate chapter on *Child Life and Play Programs* should be read by those who nurse children in adult intensive care units and by those who do not benefit from the services of play therapist or nursery nurses. The content is excellent.

For those fortunate enough to be planning new pediatric intensive care facilities the last chapter will be of particular use as a guideline.

The book, however, has omitted two major points of pediatric intensive care, on which separate chapters could have been written. The first of these is the management of children requiring long-term respiratory support, the number of which is slowly increasing. These children when nursed in units with acutely sick children have and give many problems; The second is the control of infection.

Pediatric Critical Care Nursing, although containing many American abbreviations, is overall an excellent source of information that should be available to all nurses working with acutely sick children.

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Assessment of a Patient with Lung Disease. J. R. Webb. M.T.P. Press Ltd., 1981, £ 5.95

Respiratory Infections and Tumors. R. White. M.T.P. Press Ltd., 1981, £ 5.95

Airways Obstruction. D. M. Geddes. M.T.P. Press Ltd., 1981, £ 5.95

These small 90 page books are three of a series entitled "Topics in Respiratory Disease". Two other titles are "Interstitial Lung Disease" and "Radiology of the Respiratory System". The three books reviewed are written in a uniformly clear and concise style. The black and white illustrations are well selected, the clarity of the chest radiographs being particularly good. Each book also contains about sixteen small colour prints which are of reasonable quality but frequently contribute little except to increased costs. The content is clearly restricted to what the authors consider to be essential information, and the overall style is, of necessity, quite didactic. Clearly one would not agree with all the statements that are made, but overall it would be difficult to criticise the presentation of the subject matter selected for these books. A few key references and a further reading list are included at the end of each book.

No preface is given and I am a little unsure as to the overall intention of the publishers and series editor. Presumably, the books are intended for medical students and those graduates who require a general, but not detailed, "overview" of respiratory medicine. At nearly £ 6.00 per book, the entire series would cost nearly £ 30.00, which is of the same order of magnitude as the well established specialized text books of chest medicine. In terms of content, a large textbook provides very much more information and discussion and many more references. To be set against this, the Topics in Respiratory Disease books are easy to read and well presented. I suspect that the average reader will retain rather more essential information about chest diseases after reading this series of books than after reading some of the more authoritative and comprehensive works on the topic.

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Instrumentation for Coronary Care. S. L. Grandis. Cambridge University Press, 1981, pp 134, £ 16.50

In the preface to this book the author states that the aim is "partly to explain, in simple terms, uses to which machines are put and how to recognise and correct some problems". This is an area where sound literature with particular application to nurses has been lacking up to now. The author has recognised this deficiency and attempted to resolve it. She gives step-by-step guidance to the coronary care nurse and thereby reduces the learning by trial and error which can occur in this area.

The book opens with a chapter discussing the *Conduction of Electricity in the Heart* which gives brief background information on the propagation of electrical impulses and moves on to discuss the normal and selected abnormal ECG waveforms. Each area discussed is well supported by diagrams and clear examples throughout the book. The efforts of the author are not directed towards writing about electrocardiography; the chapter is necessarily limited and represents an introduction only to this vast subject.

Thereafter, each chapter deals with a particular subject: monitoring with the aid of a cardioscope; resuscitation; pacemakers; pressure monitoring; intra aortic balloon pump; aspects of safety. No specific format is used but generally there is a short explanation of the related physiology and an introduction to the topic. In each section Ms. Grandis examines the equipment that may be found, the procedure followed and discusses the complications. Detailed instructions on how to perform a procedure are given, e.g. how to take a 12-lead ECG. Such explanations, not present in conventional coronary care textbooks, include a comprehensive list of the equipment and aids necessary for the task. This works well when considering, for example, *The Taking of a 12-Lead ECG* but less so for such procedures as the insertion of a temporary pacing electrode. Throughout the book the author gives very specific details, but application to individual units would have been easier if she had concentrated more on general principles. In several instances she makes little allowance for the variation found between one hospital and another.

The strength of the book lies in the sections dealing with the difficulties and problems that may be experienced, for example, when taking an ECG or recording pulmonary artery pressures. The solutions to these dilemmas are usually learnt by practice but in this book. Ms. Grandis gives clues on what to look for and suggestions about how to anticipate and overcome these situations. It is obviously based on her own clinical experience and certainly gives useful and helpful tips to the novice.

It is encouraging to find amid the plethora of American texts on all aspects of medicine (not the least nursing and cardiology) an English book which is also written by a nurse. At times Ms. Grandis is very forward looking and talks, for instance, of nurses "accepting the responsibility to perform a challenging and rewarding procedure" when describing defibrillation. This type of attitude does not predominate throughout the book, however. In these days of change and the nursing process its tone is one of 'nurses helping doctors'. Excluding reference to cardiac arrest and defibrillation there is only one reference found in the chapter on *Intra Aortic Balloon Pump* to a nurse assessing a patient him or herself.

The scope of the book could have been extended to include mention of newer techniques such as telemetry monitoring and the illustrations could have shown more equipment. Ms. Grandis discusses at length the precautions and potential difficulties that may be encountered when using electrode jelly. She omits even to mention pre-jellied pads that have been available for some time and are excellent to use.

In conclusion, the concept of this book is a good one. Its presentation is clear and it is well laid out with numerous references to the diagrams shown and cross-references to other parts of the book. At the end of each chapter there are useful suggestions for

further reading. Although explanations are sometimes too brief, in the main items are well explained. This book is only useful, however, to the coronary care nurse or technician at a relatively junior level, and at £ 16.00 for a hardback version, I do not recommend it for individual purchase. For guidance it could be useful for a limited time to new nurses in a Coronary Care Unit and so could be used as a resource book in such an area.

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1981 Year Book of Emergency Medicine. David K. Wagner (ed). Year Book Medical Publishers Inc., Chicago

Collections of abstracts have an uncertain objective. Within a small speciality they may well offer a comprehensive review of areas of interest, of advance or of dispute. In the face of the massive outpourings of the world's medical presses even this task may be too much, or merely result in books of interest to the novice specialist. The aims of the Year Book of Emergency Medicine are not so limited. This is the 25th title in the Year Book series and results from the recognition in 1979 of Emergency Medicine as a "boarded discipline" in the USA. In the words of the Editor, "it is appropriate that this newest of specialities continues to develop and define its clinical and investigative knowledge base. The institution of a Year Book represents an ongoing commitment to participate in this evolution". The aims are thus far from modest, and as can be guessed from the language of the Editor, represent a particularly American view of medicine.

Relevant articles from 155 journals are abstracted in the 337 pages of text, covering a range of subjects from the management of fractures to psychiatry, from rehabilitation to chronic hypoglycaemia in diabetes. The result is very much a "Reader's Digest" of medicine and surgery, an impression helped by friendly editorial comments such as "there is a trick to remember!" and "Diagnosing hysteria is tough. Curing is even tougher". The transatlantic interest is further expressed by two sections devoted to the management of gunshot wounds, and discussion of the Ski Boot Compression Syndrome. Other subjects of wide interest are, however, covered in some detail, this being particularly true of circulatory and respiratory support in the acutely ill patient. The management of other common emergency problem is poorly represented. Drug overdose warrants only five references (three on haemoperfusion) and cerebral ischaemia only two (one of these being a report on the management of ischaemic rabbits). The pecking behaviour of the woodpecker is, however, discussed and illustrated. Advances in the management of gastrointestinal haemorrhage are reasonably well reviewed and there is a good section dealing with obstetric emergencies.

The overall effect is patchy. In view of the impossible task of abstracting all the relevant papers covering acute medicine and surgery published in 1979 and 1980, this is not altogether surprising. It is hard to see a real need for this volume, for it falls between so many stools. It is, however, fair to read (much as is "Reader's Digest") since it can be managed in small mouthfuls, and is therefore eminently suitable for light medical reading on the train, or in traffic jams.

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Hazards and Errors in Anaesthesia. D. A. Buxton Hopkin. Springer-Verlag, 1980, pp 296, US \$ 28.40

Hazards and Errors in Anaesthesia is a title which could well appeal to a wide variety of practising anaesthetists. However, the preface tells us that it is designed firstly to provide information for beginners about the pitfalls of anaesthesia, and secondly to help the occasional anaesthetist in remote areas anaesthetising for unfamiliar operations – the latter surely being a very hazardous situation!

The book is divided into four sections. The first is devoted to pre-operative assessment, medico-legal and occupational hazards. This contains only two and a half pages on respiratory disease and of this half a page is on anaesthetic management. Some of the descriptions used would be more appropriate to the lay public rather than medical students, let alone anaesthetists e.g. a Vitalograph is described as “a bag attached to a device into which patients make maximum expiration”. In the chapter on Muscular Disorders, myasthenia gravis is described but no mention is made of the problems of the drugs used in its management. Less than a page is devoted to diabetes.

Part 2, Considerations Relevant to all Procedures, starts with a chapter on the preparation and use of anaesthetic apparatus but although the need to check a machine before use is emphasized, the method given for setting about this is much too vague to be helpful. When discussion turns to pharmacological agents, the impression can easily be gained that 500 mg thiopentone can be given with impunity to most patients and that the 2.5% solution is not likely to cause problems if injected intra-arterially. Surely a more cautious approach should be emphasized? I hope that the suggested dose of atropine 0.6 g to treat bradycardia is a typographical error rather than a true recommendation! Chlorpromazine appears to be a panacea for anaesthetist's problems, its properties ranging from restoring respiration after pethidine induced apnoea, to neutralizing endotoxin in liver failure. Indeed it merits 30 entries in the index yet the majority of anaesthetists nowadays use it very seldom if at all. Cardiovascular hazards are introduced with descriptions of physical laws which do not help to clarify the problems. The use of kPa as the unit for blood pressure measurement will not receive popular support.

The third section is on emergency surgery and starts with sensible warnings about the hazards of a full stomach and approaches to the management of this problem. A detailed description of Sellick's manoeuvre would have been of value here.

The final section covers individual procedures, including everything except open heart surgery. Problems of paediatric anaesthesia and day-stay surgery are covered.

Detailed references are not given in the text so the reader is unable to check on controversial topics although a selected bibliography is appended. The reader is left with an impression of a mixture of generalisations about hazards of anaesthesia expressed in basic terms, some highly individual approaches to the problems involved, and an attempt to structure these views and insert some scientific and modern ideas. The latter serve to confuse rather than illuminate. As far as beginners are concerned the approach is not sufficiently thorough, or in line with generally accepted current practice. If the author had presented his extensive experience gained over the years in a purely personal and anecdotal way it would have given us a far more readable and interesting work.

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Cardiopulmonary Cerebral Resuscitation. Peter Safar. Laerdal/Saunders, 1981, pp 240

This book is the second edition of a 48 page manual on Cardiopulmonary Resuscitation (CPR) prepared by the author for the World Federation of Societies of Anaesthesiologists in the 1960's. The expansion of the title to include cerebral resuscitation represents the extended scope (and size) of this edition which is really a new book. As stated in the preface: “The goal, of course, is restoration of new life with quality, including human mentation”. Written for physicians, nurses and paramedical personnel, it includes didactic instructions on CPR picked out in brown type, discussion of more advanced and controversial techniques, and hints on teaching, what to teach and to whom. The text is liberally illustrated with excellent line drawings which are available as a set of slides from the distributors.

The first chapter (almost half the book) concerns what the author calls ‘basic life support’ which may be carried out by the trained but unequipped layman. The traditional ABC (airway, breathing, circulation) approach is followed and the various techniques are well described and illustrated. The arguments for and against simultaneous IPPV and cardiac massage are clearly stated, with the conclusion that although carotid blood flow is increased by this technique, the increased intracranial pressure may worsen cerebral perfusion.

Chapter II (advanced life support) continues the alphabetical mnemonic with D (drugs), E (EKG) and F (fibrillation treatment). Many would agree that in the hospital setting this is the wrong order. Since the majority of patients arrest in ventricular fibrillation, blind defibrillation (which will not harm those in asystole) should be carried out without delay. The author endorses this only for witnessed cardiac arrest, where he endorses the doubtfully valuable technique of “cough-CPR”, in which the patient who has ventricular fibrillation is encouraged to maintain some circulation by coughing until help arrives. Enthusiastic young crash team members who enjoy the sense of drama occasioned by calling for the intracardiac needle may be disappointed to read that this route of administration is not recommended. Apart from the obvious dangers of coronary artery puncture, haemopericardium and pneumothorax, it is now known that adrenaline, atropine and lignocaine are all rapidly absorbed from the trachea in the absence of an intravenous route. A rare shaft of humour enjoins the reader not to resuscitate the decapitated or those with rigor mortis.

Under the ugly heading of Post-resuscitative Brain Orientated Therapy, the alphabetical mnemonic is pushed to its limit with G (gauging), H (humanising the outcome) and I (intensive therapy). Here, discussions of pulmonary artery catheterisation, afterload reduction, brain protection with barbiturate, etc. will probably leave the non-medical reader behind, but physicians not already in the field will find a lucid explanation of the concepts and sensible recommendations on practical procedures, drugs and dosages.

This handy paperback will prove very useful to all those concerned with teaching resuscitation techniques. It may also find a place in the white coat pocket of the intern on the crash team, who having successfully restarted the heart and having no ITU in which to dump the patient, is wondering what to do next.

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Problèmes de Réanimation. 10ième série, Tome 1: Intoxications Aiguës par les Substances Caustiques; Effects Biologiques et Conséquences Médicales des Agressions Chimiques et Nucléaires. Tome 2: Coeur et Agressions Aiguës. SPEI edit., 1981

The 10th "Journées de Réanimation Médico-Chirurgicales" of Nancy, May 1981 has been published in three parts.

The first part is concerned with acute intoxication by caustics. The most reliable reports are those of *Di-Constanzo*, on 104 fibroscopies in corrosive burns of the upper gastro intestinal tract, and of *Celerier*, reporting his own experience of surgical management of 183 adults with caustic burns. In children, *Lavano et al.* report 136 cases of caustic poisoning. Thirty-five cases of rubigine poisoning are reported by *Chollet et al.*, three cases were fatal because of hypercalcemia or gastrointestinal ulceration.

The second part is devoted to the biological and medical consequences of chemical and nuclear aggressions. The most valuable report is from *Neveux et al.* on the anatomical and clinical effects of radio-combined mammalian injuries. This work is a comparative study of the anatomical and clinical data observed in irradiated animals (DL 50/30 days) and irradiated and operated animals. In the two groups, cardio-respiratory failure is a prominent cause of death but in the second group, infection was more common.

The third part is about the heart and the acute aggressions. Numerous valuable reports are contained in some 400 pages. The influence of sodium, calcium, potassium, hypoxia, and magnesium on myocardial performance are discussed. The reports on myocardial depression during septic shock are useful in clinical practice: myocardial depression in septic shock is defined on the basis of high filling pressures (central venous pressure, pulmonary wedge pressure) or markedly increasing filling pressures during volume loading, where myocardial performance indices remain low (left ventricular stroke work index). Its prevalence is between 40 and 80 per cent of cases and myocardial depression may occur at an early stage of the septic shock. Its prognosis is poor. Apparently, due to a decrease in intrinsic myocardial contractility and a reduced ventricular compliance, the mechanism of the myocardial depression is, however, imperfectly known. Dopamine seems to be the most appropriate agent for its supportive treatment. But the eradication of sepsis is essential.

This work is useful for anaesthesiologists, cardiologists and intensivists, as well as medical doctors involved in preventing the effects of nuclear weapons.

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Fluid and Blood Component Therapy in the Critically Ill and Injured. S. Ellerbe. Churchill Livingstone, pp 112, £ 11.50

This is the first book in a series of six, all of which cover various aspects of intensive care and trauma treatment.

This first publication is a collection of eight chapters written by American nurses specialising in the varying aspects of critical care where colloid and fluid therapy are essential to the successful management of the patient.

The introductory chapters form the basis for the remaining aspects covered in the book and deal with fluid, electrolytes and haematology, and though the first of these two is liberally scattered with abbreviations, this does not detract from the content nor the reading.

Haemodynamic monitoring is covered in depth with clear tables, diagrams and explanatory text, though whilst dealing with intraflow mechanism states "which irrigates the catheter with 3 to 4 cc of solution per minute". This I feel sure is a printing error and should read per hour. The other deficiency I found in this chapter was the brevity of reference to the possible contamination of venous catheters used in invasive monitoring, with the subsequent problems of sepsis. This aspect is however briefly mentioned in connection with arterial pressure monitoring where I would not have expected to find it, whereas little emphasis is placed on the circulatory hazards of arterial cannulation in the hypotensive poorly perfused patient.

The remainder of the book covers aspects ranging from *total parenteral nutrition* to the controversial autotransfusion. Particularly interesting was the coverage of *The Head Injured Patient*, which deals at length and in depth, with the management of cerebral oedema and its treatment using diuretics, steroids, water and sodium balance. Not mentioned in association with these is intracranial pressure monitoring, which I found a surprising omission considering the methods of treatment described. This is left to the final chapter where it is briefly mentioned.

Though only containing 112 pages in hardback form, I found this book easily readable, without too much difference in the eight authors' writing style as I progressed from chapter to chapter. The vast amount of information contained in the limited number of pages makes it particularly attractive and should appeal to trauma and intensive care staff alike, and I eagerly await the other books in this series.

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Announcements

International Symposium on Critical Care Medicine

October 9, 1982, Leuven, Belgium

For information contact: Secretary, Emergency Department, University Hospital Sint-Rafael, B-3000 Leuven (Belgium), Tel.: 016/23 7921, ext.: 2190

Seventh Australasian and New Zealand Meeting on Intensive Care

October 16-18, 1982, Wentworth Hotel, Melbourne, Australia

Symposia: Structure basis of lung function - pathophysiology and electro physiology of cardiac failure - surgical sepsis - recent advances in neonatal intensive care. Free papers should be submitted by 15 August.

For information contact: L. I. G. Worthley, Honary Vice President, ANZICS, Intensive Care Unit, Royal Adelaide Hospital, North Terrace, Adelaide 5000, South Australia, Australia

International Conference on Cardiac Arrest and Resuscitation

October 19-21, 1982, Brighton, UK

This conference is sponsored by the British Heart Foundation in association with the Community Resuscitation Advisory Council, BASICS, and the Royal Postgraduate Medical School, Hammersmith.

Themes: Day 1 - Defining the Problem; The Mechanisms of Cardiac Arrest; The Predictors of Cardiac Arrest. Day 2 - Problems in the Management of Cardiac Arrest; the European Experience of Resuscitation Ambulances; Other Problems of Resuscitation. Day 3 - Future Trends in Resuscitation

For programme and reservation details please contact: Conference Services Limited, 3 Bute Street, London, SW7 3EY, UK