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Book reviews

Oral Radiosurgery: an illustrated clinical guide, 2nd edition (1997)

Jeffrey A. Sherman
Publisher: Martin Dunitz Limited, London, UK
Price: £49.95
ISBN: 1 85317 462 9

This well illustrated book provides a comprehensive and practical guide suitable for those preparing to carry out radiosurgery. The principles and theory of radiosurgery, instrumentation and techniques are clearly explained, and a safe step-by-step approach to an extensive range of clinical procedures is provided.

This second edition is very similar to the first, but has changed its title from *Oral Electrosurgery* to *Oral Radiosurgery*, and includes a section on incision and drainage, an updated evaluation of radiosurgery machines, and a chapter on patient education and marketing. The change in title is explained in the preface, where radiosurgery is defined as the most advanced form of electrosurgery. An attempt is made to compare radiosurgery with laser surgery but the classification of laser type and action is limited.

Unfortunately, this book continues to propagate unsubstantiated recommendations such as the use of radiosurgery to perform a pulpectomy, sterilization of the root canal, and desensitization of dentine. The use of radiosurgery for implant exposure is advised which carries the risk of contact with the fixture and would not be a wise practice.

Although it is stated that electrodes are self-sterilizing, a detailed account of autoclaving procedures which appears somewhat contradictory is also given. Sterilization of the handpiece, antennae and electrodes according to the Occupational Safety and Health Administration is advised. It was stated that all testing agencies recommend replacement of handpiece, antennae and electrodes after one year or 100 autoclave cycles. This ensured the efficient performance and safety of the unit. Criteria for selection of a radiosurgery unit were clearly outlined and currently available radiosurgery units were evaluated which would be a useful guide to those considering the purchase of such a unit.

There is little of interest to the orthodontist, although indications for use in orthodontics include removal of hyperplastic tissue related to brackets or removable appliances, fraenectomies, and exposure of teeth which are superficially placed prior to orthodontic treatment. However, it is generally considered that for the majority of patients intensive oral hygiene instruction may eliminate the need for hyperplastic tissue removal. Advice is provided in the text regarding the use of radiosurgery in a dry field around orthodontic brackets in order to prevent transmission of the radiosignal to the orthodontic brackets and subsequent burning of soft tissues.

In summary, this text is clearly presented and well illustrated. In general, it provides a useful practical guide for both undergraduate clinical use and the interested general dental practitioner.

Ailbhe McDonald

A Textbook and Color Atlas of Tooth Impactions. Diagnosis, Treatment and Prevention (1997)

Jens O. Andreasen, Jens Kolsen Petersen and Daniel M. Raskin
Publisher: Munksgaard, Copenhagen
Price: DKK 1200.00
ISBN: 07 16 10693 8

This book comprehensively covers the orthodontic and surgical treatment of impacted teeth. It is edited by three world authorities in this field and comprises a series of chapters written by 22 contributors, mostly from Scandinavia.

The first chapters provide information on the mechanism and timing of tooth eruption. These are then followed by extensive and detailed chapters describing the diagnosis, aetiology and treatment of impactions of individual tooth types, the largest of which is devoted to third molars. The next chapters are concerned with impactions associated with cleft lip and palate, and genetic and endocrine disturbances. The remainder of the book provides information on risk/benefit and medico-legal considerations in the management of impactions. A summary and an extensive list of references conclude each chapter.

The quality of the histological, clinical, and radiological illustrations is superb and this is a major strength of the book. The text is concise, easily readable, and is full of clinical tips and advice. One slight observation is that most of the treatment outlined is based upon expert opinion, clinical experience, and retrospective investigations. However, this is not intended as a criticism because this reflects the level of evidence on which most orthodontic treatment is based.

In summary, the authors are to be congratulated on producing an excellent book that should be an essential text in the library of every orthodontic and oral surgery department.

Kevin O'Brien

nQuery Advisor® Release 2.0. Study Planning Software Statistical Solutions Ltd., 8 South Bank, Crosse's Green, Cork, Ireland, *http://www.statsol.ie*

Test System: 150 MHz Pentium MMX, 32Mb Ram, Windows 95 release B.
Price: Academics £395.00 Commercial £445.00

To misquote Benjamin Disraeli 'There are three kinds of lies: lies, damned lies, and how many samples do I need?'. When a researcher is given the answer to the sample size the response is usually 'lies, damn lies' with the result that the experiment is then carried out with the universal sample size of 10! It is unfortunate that many researchers do not understand the concepts of experimental design especially sample size and power calculations, and thus do not bother with them resulting in inadequate and unethical experiments. nQuery Advisor is designed to eliminate lies and damn lies.

nQuery Advisor is a package designed to assist in all aspects of sample size calculations, and can also be used for retrospective analysis of published results to evaluate reported 'non-significant effects'. The program is compact, 3Mb disk space, 8Mb RAM; installation is straightforward and an uninstall option is available. There is a comprehensive manual that is well written, covers all aspects of the program, provides worked examples for every calculation, and includes two comprehensive tutorials covering two-sample tests and analysis of variance. Online help is good, and there is a range of 'Guides' and 'Assistants' to help with data entry and calculations.

The program covers six main areas: Means, Nonparametric, Proportions, Survival, Agreement and Regression involving over 40 different experimental situations including equivalence,

contrasts, logistic regression and confidence. In many cases there is the option of using unequal sample sizes. Data is entered in a spreadsheet format. Typically for a one-way analysis of variance you provide the significance, number of groups, variance of the means, common standard deviation, and then the effect size is calculated (an Assistant is available to provide help). Power or sample size is entered and the remaining variable calculated. You then have the ability to alter either effect size, power or sample size and carry out a 'What-if' analysis of the experimental design and plot the results as a power curve. The results for each particular analysis are also available in the form of a statement which can be cut-pasted into any document e.g. "When the sample size in each of the three groups is 19, a one-way analysis of variance will have 90 per cent power to detect at the 0.050 level a difference in means characterised by a Variance of means, $\mathbf{V} = \Sigma(\mu_i - \mu)^2/G$ of 8.667, assuming that the common standard deviation is 6.000". The only problem is that the Greek characters in this statement do not appear to survive the paste process!

Of particular interest in the dental/medical environment is the Survival Analysis module which, in addition to standard situations, has options to allow the analysis of user specified accrual and drop out rates, variable drop out rates and non-constant hazard ratios. I am not aware of this capability being available in any other program. There are also options to evaluate means and proportions when there is a finite population and to change the distribution functions used in the power calculations.

All methods used in the program have been validated, but in an interesting innovation this information is not provided in the manual, but is available on a Web page for interested users. If I have a criticism of this program it is a pedantic one that the analysis of correlation, a measure of association, is included in the chapter on agreement—but at least it is there.

In conclusion this is the most comprehensive sample size or study planning program that I have used. In the current environment when an inadequate experimental design, i.e. The sample size is too small resulting in an unethical trial, may result in litigation, nQuery Advisor ought to be essential for any researcher.

Martyn Sherriff