■ REVIEWS OF EDUCATIONAL MATERIAL

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CCEL Anesthesia featuring *Anesthesia* Fourth Edition. Edited by Miller RD, Cucchiara RF, Miller ED, Reves JG, Roizen M, Savarese JJ. New York, Churchill Livingstone, 1995. 34,520 records. Price: $350.00 ($450.00 with GenRx, $595 for Network, $695 for Network with GenRx).

How can you carry a 2,700-page anesthesiology textbook in your pocket? Either get a coat with very large pockets or consider purchasing this CD-ROM edition of Miller's *Anesthesia* (4th edition). A CD-ROM "textbook" does not lend itself to cover-to-cover reading, so this review focuses primarily on the capabilities and idiosyncracies of the computer implementation.

The review version of the software operates on a Microsoft Windows platform; a Macintosh version is planned for January 1996. The user manual provides clear installation instructions, and the procedure is similar to that used for most Windows applications. Because the setup program is located on the CD-ROM, no floppy discs are needed. Installation times range from less than 1 min (75 MHZ Pentium processor with double-speed CD-ROM) to 5 min (486 SX 40 MHZ computer with single-speed CD-ROM). Once the process is complete, your desktop will have a new "CCEL Anesthesia" program group. Double-click on "Miller 4e," and you're on your way. Each time you start the program, you are presented with a button to double-click for an online "Quick Start Tutorial," which contains a description of many of the program's useful features. You have the option of either reading through the entire document or jumping to areas of interest by double-clicking on italicized key words. However, the easiest way to start using the CD-ROM database is to follow the brief tutorial included in the instruction booklet. This uses a step-by-step example to introduce the functions of the most important program controls, including those on the "toolbelt"—a set of buttons that can be customized to perform common functions. A word of caution: Toolbelt buttons require only a single click; double-clicking may undo the desired function or close the data base.

There are several ways to navigate through the text: sequentially, by section headings, and by searching for a specific word or words. Reading full chapters on a video monitor is tedious; although it is relatively easy to print selected sections of the text for subsequent review, the associated figures and tables must be printed separately. Searching by chapter and subheading titles involves sequentially expanding the chapter display tree to show various levels of headings, until you locate those you believe contain the desired information. Double-clicking on the appropriate subheading reveals the relevant text. Unfortunately, this is not as convenient as browsing through a printed book, because you don't get to see what's in the various sections until you've chosen a specific one to view.

It is the ability to search the entire text for specific combinations of words that distinguishes the CD-ROM version of *Anesthesia* from its printed counterpart. The search program displays a series of branches, with the number of concurrent "hits" immediately apparent as additional key words are specified (fig. 1). The boolean operators "and", "or," and "not" are available and apply to occurrences of words within the same record (paragraph, figure legend, or citation) of the database. Wild card operators are supported, and the program suggests key words as you type. For instance, after typing

"diph," the computer suggests the word "diphenhydramine"; you have the option of selecting this choice by hitting the "enter" key or of selecting a different key word by continuing to type additional letters. Key words from previous searches can be recalled by clicking on the "up" arrow at the right-hand side of the search display. Despite the availability of these powerful tools, I spent more than 15 min in an unsuccessful search for a table of maximum safe local anesthetic doses. After locating the desired information in table 15-4 of the printed version of *Anesthesia,* I returned to the computer and discovered the reason that my electronic search failed: Tables are stored in graphics rather than text form; therefore, their contents cannot be searched electronically.

Figures and tables do not appear within the text. Instead, references to them appear in red italics, indicating the availability of a "popup window," which may be opened by double-clicking on the indicated words. This mechanism is somewhat inconvenient, because the text frequently offers no guidance regarding the contents of the linked table or figure. Also, after selecting a figure, you are initially presented with its legend and must click on a button within the legend to see the figure, at which point the legend disappears. You can return to the text by either clicking on the "close" icon or selecting "Miller 4th Edition" from the "Window" menu at the top of the screen. The latter strategy, along with the "Tile" or "Cascade" function, enables you to view the text and figure simultaneously. Unfortunately, although the instructions indicate that it is designed to take you back through links you have followed, the backtrack button on the toolbelt does not return you from a figure or table to the body of the text.

Another unique feature of the CD-ROM edition is the on-line literature search capability. Double-clicking on a reference number reveals a "Pop-up" window with the selected citation in the same format as in the printed edition. Most of the references are cross-linked to the CCEL "Medline" data base, which is contained on the same compact disk. Double-clicking the "Medline" button opens this data base, and the complete citation and abstract of the article appear on the screen. In addition to the citations from *Anesthesia,* the Medline program includes many other anesthesia-related articles from the previous 5 yr. It can be searched independently using either a free-form or a "template" strategy. The latter enables you to limit your search to a specific title, author, year of publication, journal, or MeSH category.

Finally, the CD contains a Physician's GenRx data base. Similar to the formulary books commonly found in hospitals, this volume can be searched either for drug name or any word combination appearing within the entire volume. A template is provided, enabling you to narrow your search by specifying generic or brand names or specific drug categories. Although included on the CD, the GenRx database is an extra-cost option. It is activated by the "Rights Browser," which is found in the "CCEL Anesthesia" group. When this program is run, a series of random characters appears on the screen; after calling the publisher (not a toll-free call) and providing a credit card number for billing ($100.00), you read these characters to an operator and are given an equally cryptic code that unlocks the GenRx data base on that computer. (If you move your CD to another computer, GenRx will not be available.)

The search features, self-contained Medline access, and compact size are unique advantages of the CD-ROM version of Miller's *Anesthesia* textbook. The inability to see tables and figures while browsing
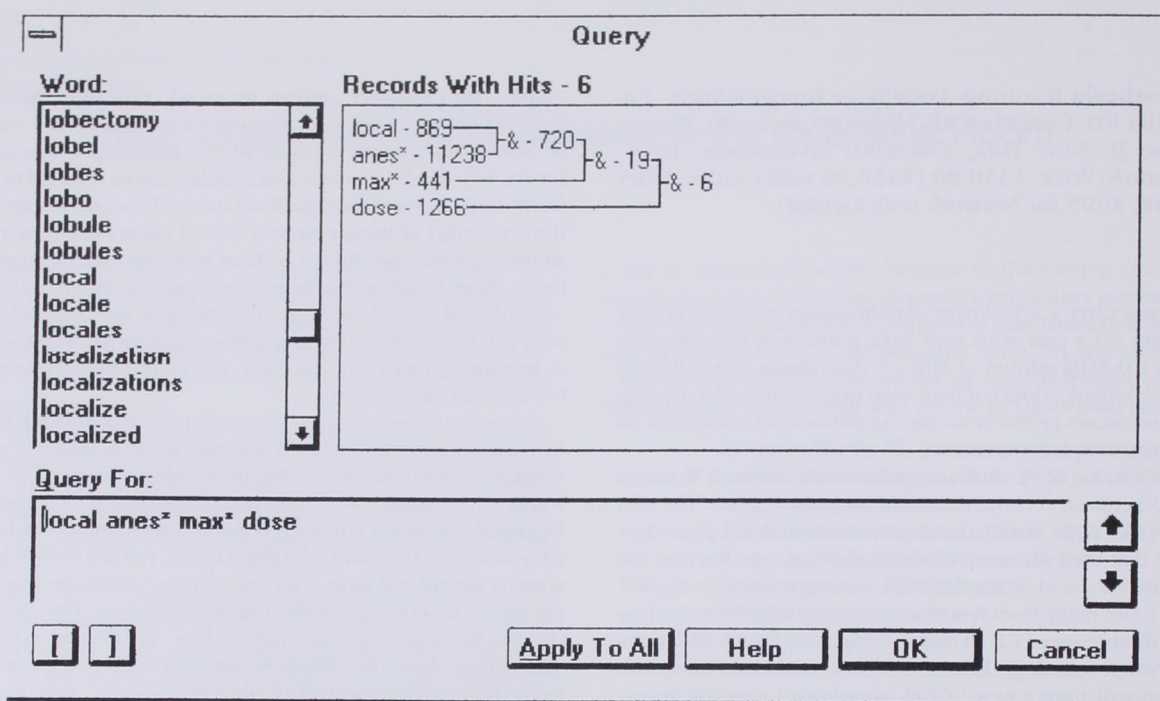
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Fig. 1. Search tree showing running total of instances where the indicated words appear in the same record. This sequence failed to reveal table 15-4, which contains maximum safe doses for local anesthetics given by infiltration.

through a selected section of text is a significant drawback. Some of the tricks of navigating through the database are not initially obvious but become natural with practice; the absence of a fully functional backtrack feature is a particular inconvenience. The instruction booklet and on-line documentation are adequate. In summary, while not a substitute for the printed version, the CCEL CD-ROM version of the 4th edition of *Anesthesia* is a useful complement to conventional textbooks and a welcome addition to the anesthesiologist's software library.

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The Case Books of Dr. John Snow. Edited by Ellis RH. London, Wellcome Institute for the History of Medicine, 1994. Pages: 633. Price: $38.00.

John Snow (1818–1858) was an astute laboratory investigator of basic problems related to situations encountered in the early days of anesthetic practice. Above all, he was a shrewd physician and the foremost clinical anesthetist of his day. He probably accomplished more to aim newly introduced anesthesia toward today's pattern of clinical practice and research than any other early practitioner of the art.

Snow recorded many observations and conclusions from most of the patients he attended during the period 1848–1853 in the capacity of both anesthetist and general practitioner. The case books containing this material ultimately came into the possession of the Royal College of Physicians, London, where they have since resided very much underutilized as a primary source of historical material. These case books have been made readily available to the anesthesia community through a most scholarly and comprehensive compilation, editing, and annotation by the late Dr. Richard Ellis. He found these volumes in deteriorating condition, and his motives for preparing the current work included prevention of further wear and tear on these fragile 19th century documents and to ensure that the material remains accessible to future interested parties.

The introduction to the actual case books written by Ellis contains the most detailed and comprehensive biography of Snow since that published in 1858 (included in Snow's posthumously published volume on chloroform) by Dr. Benjamin Ward Richardson, one of Snow's close professional colleagues. Snow's early life, medical training, and career as a practitioner are described. Ellis proposed that the professional status finally attained by John Snow, as well as that of some of his siblings, was exceptional in view of the meager educational opportunities available in the early 19th century for the children of poor working class families. Snow came to London in 1836 for further medical education and then practiced his profession for the remainder of his life in that locality.

Ellis describes in detail the history, format, characteristics, and peculiarities of the case books as well as some of the problems encountered in their analysis and transcription. The volumes constitute a fascinating portrait of anesthesia practice in its early years. Probably