

Reviews

Reviews of books for this section are welcomed from osteopathic physicians and from faculty members in osteopathic institutions; see "Information for Contributors" for information on format. A certain number of reviews are invited for books supplied to JAOA by publishers; persons wishing to be part of this program should write to the editors, giving background and areas of interest.

Outpatient management of advanced cancer

By J. Andrew Billings. Pp. 340, with illus. J.B. Lippincott Co., East Washington Square, Philadelphia 19105, 1985, \$29.95.

Outpatient management of advancing terminal illness is becoming a widely accepted modality of treatment. With the advent of DRGs and limited lengths of stay for critical diseases, the health professions are attempting to expand services that were previously offered only in the hospital setting. Additionally, societal changes in the last 10 years have led to a greater acceptance of handling issues related to death and dying. Many families now readily seek assistance in preparing for this very painful period in their lives.

J. Andrew Billings offers many support mechanisms for dying patients and their family members. But *Outpatient management of advanced cancer* can also be utilized by professionals and paraprofessionals. As a physician caring for the terminally ill, I found it interesting to read the various scenarios and psychological ramifications from the perspec-

tives of both the family and the physician. Few texts assist the physician in understanding the patient's feelings of resentment. Nor do most books help the professional to cope with the myriad of critical and painful questions that he or she encounters daily. For example, what are a doctor's obligations in informing families of the extent of a disease? How can small children be counseled to cope with the death of a parent? How could a hospice help a patient?

I recommend this book to any professional who cares for terminally ill patients. *Outpatient management of advanced cancer* would also be an excellent reference for any hospice program that is establishing policy standards for frequently encountered problems.

MARY JO K. VOELPEL, D.O.
Pontiac, Michigan

Single-photon emission computed tomography

By Barbara Y. Croft. Pp. 306, with illus. Year Book Medical Publishers, Inc., 35 East Wacker Drive, Chicago 60601, 1986, \$39.95.

While the basic approach to radionuclide imaging has been a two-dimensional portrayal of the physiologic distribution of activity, the need for image discrimination in the third dimension has recently become obvious. Dr. Croft's book represents one major step toward meeting that challenge. This hardcover, first-edition text covers the basic principles of single-photon emission computed tomography (SPECT) as they relate to the science and practice of nuclear medicine. The material is sufficiently technical to appeal to a wide

range of scientists and physicians interested in this developing field, although all chapters may not readily fall within the easy comprehension of every reader. That is to say, do not expect a simple review of the image findings in various disease states.

The book begins with a brief history of tomography. Chapter 2 addresses the theory of SPECT both from a qualitative perspective (descriptive) and from a deeper, more thorough treatment, which uses mathematics when appropriate. Chapter 3 describes the various kinds of nuclear instruments, and chapter 4 details the computers used in SPECT. Types of data acquisition and a brief critique of radionuclide tomography, with special attention given to future directions, comprise chapters 5 and 6. Quality assurance procedures are the focus of chapter 7. The final chapter discusses the clinical applications of SPECT that are presently in use or described in the literature.

The last two chapters of the book are of particular interest and value to the clinician who is involved in the actual practice of SPECT. The treatment of quality assurance procedures and acceptance testing is perhaps the best in print on the subject. The presentation of the clinical uses of SPECT, although brief, is stimulating and very well written. One drawback of this chapter is that some of the applications are not accompanied by the high-quality, reconstructed images found elsewhere in the SPECT literature. There is adequate review of correlative imaging modalities.

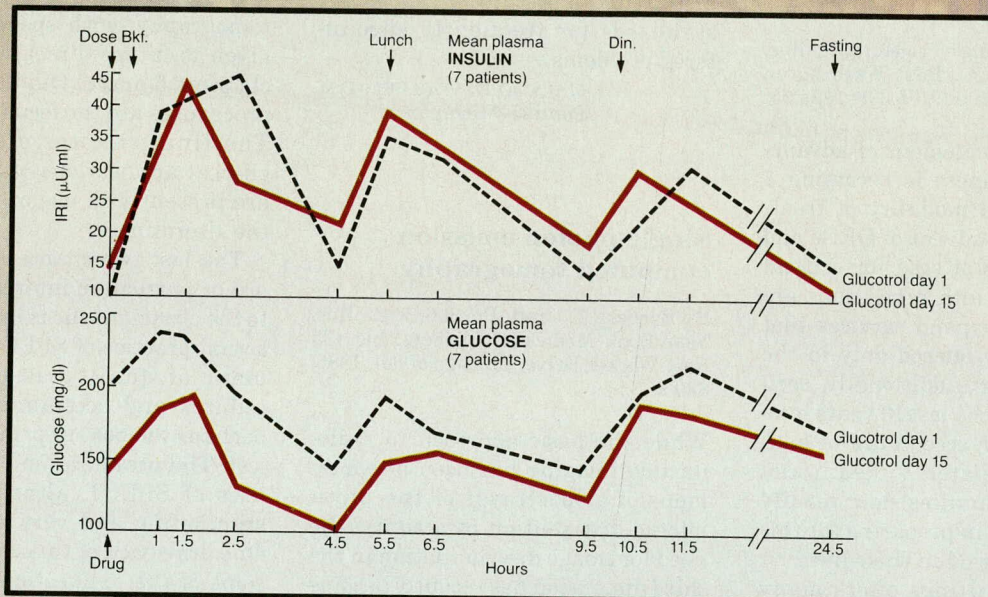
In conclusion, this quality text is highly recommended as an introduction and reference for all nuclear physicians, scientists, and residents

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Glucotrol[®]
(glipizide) 5-mg and 10-mg
Scored Tablets

Breaking barriers

more normal insulin release and utilization



(Adapted from Peterson CM, et al¹)

Glucose and insulin response to three standard meals was measured at eleven time points on the first and fifteenth days of administration of Glucotrol (glipizide) to seven patients with NIDDM. The mean dose of Glucotrol was 8.7 mg per day (0.1 mg/kg).

■ Insulin levels rose markedly after the first meal, then dropped, then rose again following subsequent meals.

■ The insulin response pattern with Glucotrol closely simulates the pattern commonly seen in nondiabetics.

References: 1. Peterson CM, Sims RV, Jones RL, et al: Bioavailability of glipizide and its effect on blood glucose and insulin levels in patients with non-insulin-dependent diabetes. *Diabetes Care* 1982; 5:497-500. 2. Melander A, Wåhlin-Boll E: Clinical pharmacology of glipizide, in *Proceedings of a Symposium: New Perspectives in Noninsulin-Dependent Diabetes Mellitus and the Role of Glipizide in Its Treatment*. Am J Med, pp. 41-45, Nov. 30, 1983. 3. Feinglos MN, Lebovitz HE: Long-term safety and efficacy of glipizide, in *Proceedings of a Symposium: New Perspectives in Noninsulin-Dependent Diabetes Mellitus and the Role of Glipizide in Its Treatment*. Am J Med, pp. 60-66, Nov. 30, 1983.

ROERIG **Pfizer**

to glucose control in NIDDM

**with significant advantages
for many NIDDM patients**

Rapid, consistent therapeutic action "The aim of sulfonylurea treatment should be complete normalization of glucose economy... therefore, the sulfonylurea should be potent and rapid-acting. Moreover, it should have complete bioavailability in order to minimize variations between and within individual subjects.
"Glipizide [Glucotrol] has complete bioavailability and its absorption and onset of action are very rapid."²

Rapid excretion, inactive metabolites "As glipizide [Glucotrol] is very rapidly eliminated, and as there is no evidence that its metabolites are significantly active, the risk of long-lasting hypoglycemia should be small...."² However, as with all sulfonylureas, hypoglycemia may occur.

Long-term metabolic improvement "Long-term therapy with glipizide, in contrast to studies of other sulfonylureas, often results in a sustained increase in glucose-stimulated insulin secretion."³

While controversy remains in the findings of the UGDP, there have been reports of increased cardiovascular risk associated with oral hypoglycemic therapy.

Glucotrol[®]
(glipizide) 5-mg and 10-mg
Scored Tablets

When diet alone fails in non-insulin-dependent diabetes mellitus

Please turn page for Glucotrol[®] (glipizide) prescribing information.

GLUCOTROL® (glipizide) Tablets Brief Summary of Prescribing Information

INDICATIONS AND USAGE: GLUCOTROL is indicated as an adjunct to diet for the control of hyperglycemia in patients with non-insulin-dependent diabetes mellitus (NIDDM, type II) after an adequate trial of dietary therapy has proved unsatisfactory.

CONTRAINDICATIONS: GLUCOTROL is contraindicated in patients with known hypersensitivity to the drug or with diabetic ketoacidosis, with or without coma, which should be treated with insulin.

SPECIAL WARNING ON INCREASED RISK OF CARDIOVASCULAR MORTALITY: The administration of oral hypoglycemic drugs has been reported to be associated with increased cardiovascular mortality as compared to treatment with diet alone or diet plus insulin. This warning is based on the study conducted by the University Group Diabetes Program (UGDP), a long-term prospective clinical trial designed to evaluate the effectiveness of glucose-lowering drugs in preventing or delaying vascular complications in patients with non-insulin-dependent diabetes. The study involved 823 patients who were randomly assigned to one of four treatment groups (*Diabetes* 19, supp. 2:747-830, 1970).

UGDP reported that patients treated for 5 to 8 years with diet plus a fixed dose of tolbutamide (1.5 grams per day) had a rate of cardiovascular mortality approximately 2-1/2 times that of patients treated with diet alone. A significant increase in total mortality was not observed, but the use of tolbutamide was discontinued based on the increase in cardiovascular mortality, thus limiting the opportunity for the study to show an increase in overall mortality. Despite controversy regarding the interpretation of these results, the findings of the UGDP study provide an adequate basis for this warning. The patient should be informed of the potential risks and advantages of GLUCOTROL, and of alternative modes of therapy.

Although only one drug in the sulfonylurea class (tolbutamide) was included in this study, it is prudent from a safety standpoint to consider that this warning may also apply to other oral hypoglycemic drugs in this class, in view of their close similarities in mode of action and chemical structure.

PRECAUTIONS: Renal and Hepatic Disease: The metabolism and excretion of GLUCOTROL may be slowed in patients with impaired renal and/or hepatic function. Hypoglycemia may be prolonged in such patients should it occur.

Hypoglycemia: All sulfonylureas are capable of producing severe hypoglycemia. Proper patient selection, dosage and instructions are important to avoid hypoglycemia. Renal or hepatic insufficiency may increase the risk of hypoglycemic reactions. Elderly, debilitated, or malnourished patients and those with adrenal or pituitary insufficiency are particularly susceptible to the hypoglycemic action of glucose-lowering drugs. Hypoglycemia may be difficult to recognize in the elderly or people taking beta-adrenergic blocking drugs. Hypoglycemia is more likely to occur when caloric intake is deficient, after severe or prolonged exercise, when alcohol is ingested, or when more than one glucose-lowering drug is used.

Loss of Control of Blood Glucose: A loss of control may occur in diabetic patients exposed to stress such as fever, trauma, infection or surgery. It may then be necessary to discontinue GLUCOTROL and administer insulin.

Laboratory Tests: Blood and urine glucose should be monitored periodically. Measurement of glycosylated hemoglobin may be useful.

Information for Patients: Patients should be informed of the potential risks and advantages of GLUCOTROL, of the alternative modes of therapy, as well as the importance of adhering to dietary instructions, of a regular exercise program, and of regular testing of urine and/or blood glucose. The risks of hypoglycemia, its symptoms and treatment, and conditions that predispose to its development should be explained to patients and responsible family members. Primary and secondary failure should also be explained.

Drug Interactions: The hypoglycemic action of sulfonylureas may be potentiated by certain drugs including non-steroidal anti-inflammatory agents and other drugs that are highly protein bound, salicylates, sulfonamides, chloramphenicol, probenecid, coumarins, monoamine oxidase inhibitors, and beta adrenergic blocking agents. *In vitro* studies indicate that GLUCOTROL binds differently than tolbutamide and does not interact with salicylate or dicumarol. However, caution must be exercised in extrapolating these findings to a clinical situation. Certain drugs tend to produce hypoglycemia and may lead to loss of control, including the thiazides and other diuretics, corticosteroids, phenothiazines, thyroid products, estrogens, oral contraceptives, phenytoin, nicotinic acid, sympathomimetics, calcium channel blocking drugs, and isoniazid.

Carcinogenesis, Mutagenesis, Impairment of Fertility: A 20-month study in rats and an 18-month study in mice at doses up to 75 times the maximum human dose revealed no evidence of drug-related carcinogenicity. Bacterial and *in vivo* mutagenicity tests were uniformly negative. Studies in rats of both sexes at doses up to 75 times the human dose showed no effects on fertility.

Pregnancy: Pregnancy Category C: GLUCOTROL (glipizide) was found to be mildly fetotoxic in rat reproductive studies at all dose levels (5-50 mg/kg). This fetotoxicity has been similarly noted with other sulfonylureas, such as tolbutamide and tolazamide. The effect is perinatal and believed to be directly related to the pharmacologic (hypoglycemic) action of GLUCOTROL. In studies in rats and rabbits no teratogenic effects were found. There are no adequate and well-controlled studies in pregnant women. GLUCOTROL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Because recent information suggests that abnormal blood glucose levels during pregnancy are associated with a higher incidence of congenital abnormalities, many experts recommend that insulin be used during pregnancy to maintain blood glucose levels as close to normal as possible.

Nonteratogenic Effects: Prolonged severe hypoglycemia has been reported in neonates born to mothers who were receiving a sulfonylurea drug at the time of delivery. This has been reported more frequently with the use of agents with prolonged half-lives. GLUCOTROL should be discontinued at least one month before the expected delivery date.

Nursing Mothers: Since some sulfonylurea drugs are known to be excreted in human milk, insulin therapy should be considered if nursing is to be continued.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: In controlled studies, the frequency of serious adverse reactions reported was very low. Of 702 patients, 11.8% reported adverse reactions and in only 1.5% was GLUCOTROL discontinued.

Hypoglycemia: See PRECAUTIONS and OVERDOSAGE sections.

Gastrointestinal: Gastrointestinal disturbances, the most common, were reported with the following approximate incidence: nausea and diarrhea, one in 70; constipation and gastralgia, one in 100. They appear to be dose-related and may disappear on division or reduction of dosage. Cholestatic jaundice may occur rarely with sulfonylureas: GLUCOTROL should be discontinued if it occurs.

Dermatologic: Allergic skin reactions including erythema, morbilliform or maculopapular eruptions, urticaria, pruritus, and eczema have been reported in about one in 70 patients. These may be transient and may disappear despite continued use of GLUCOTROL; if skin reactions persist, the drug should be discontinued. Porphyria cutanea tarda and photosensitivity reactions have been reported with sulfonylureas.

Hematologic: Leukopenia, agranulocytosis, thrombocytopenia, hemolytic anemia, aplastic anemia, and pancytopenia have been reported with sulfonylureas.

Metabolic: Hepatic porphyria and disulfiram-like alcohol reactions have been reported with sulfonylureas. Clinical experience to date has shown that GLUCOTROL has an extremely low incidence of disulfiram-like reactions.

Miscellaneous: Dizziness, drowsiness, and headache have each been reported in about one in fifty patients treated with GLUCOTROL. They are usually transient and seldom require discontinuance of therapy.

OVERDOSAGE: Overdosage of sulfonylureas including GLUCOTROL can produce hypoglycemia. If hypoglycemic coma is diagnosed or suspected, the patient should be given a rapid intravenous injection of concentrated (50%) glucose solution. This should be followed by a continuous infusion of a more dilute (10%) glucose solution at a rate that will maintain the blood glucose at a level above 100 mg/dL. Patients should be closely monitored for a minimum of 24 to 48 hours since hypoglycemia may recur after apparent clinical recovery. Clearance of GLUCOTROL from plasma would be prolonged in persons with liver disease. Because of the extensive protein binding of GLUCOTROL (glipizide), dialysis is unlikely to be of benefit.

DOSE AND ADMINISTRATION: There is no fixed dosage regimen for the management of diabetes mellitus with GLUCOTROL; in general, it should be given approximately 30 minutes before a meal to achieve the greatest reduction in postprandial hyperglycemia.

Initial Dose: The recommended starting dose is 5 mg before breakfast. Geriatric patients or those with liver disease may be started on 2.5 mg. Dosage adjustments should ordinarily be in increments of 2.5-5 mg, as determined by blood glucose response. At least several days should elapse between titration steps.

Maximum Dose: The maximum recommended total daily dose is 40 mg.

Maintenance: Some patients may be effectively controlled on a once-a-day regimen, while others show better response with divided dosing. Total daily doses above 15 mg should ordinarily be divided.

HOW SUPPLIED: GLUCOTROL is available as white, dye-free, scored diamond-shaped tablets imprinted as follows: 5 mg tablet—Pfizer 411 (NDC 5 mg 0049-4110-66) Bottles of 100; 10 mg tablet—Pfizer 412 (NDC 10 mg 0049-4120-66) Bottles of 100.

CAUTION: Federal law prohibits dispensing without prescription.
More detailed professional information available on request.

who are initiating or participating in SPECT imaging.

MICHAEL J. BLEND, PH.D., D.O.
Assistant Professor and
Associate Director of Nuclear Medicine
University of Illinois School of
Medicine at Chicago
Chicago, Illinois

Sympathy and science: Women physicians in American medicine

By Regina Markell Morantz-Sanchez. Pp. 496. Oxford University Press, 200 Madison Avenue, New York 10016, 1985, \$24.95.

This interesting book points out the multiple problems that were encountered by the early female pioneers who wanted to enter the male-dominated worlds of medicine and surgery. The text begins with a chapter entitled "Colonial beginnings: Public men and private women," and ends with annual ratios of male/female physicians.

The author has performed a tremendous amount of research. The bibliography is exhaustively complete, and the notes on methodology are interesting. Further notes at the end of the book clarify and emphasize various points.

A remarkable female physician of the 1890s is quoted in the book. "Holiness," she used to say, "is simply wholeness. Righteousness is rightness, right doing....Our first duty is to work the beautiful engineering of body, intellect, and will in such a way as to make the very best of all the powers God has given us." This observation intrigued the reviewers because, basically, it encompasses the holistic theory that we have tried to teach in our osteopathic medical schools in the last several decades.

The word "ovariotomists"—curious terminology—has been used to describe early women surgeons. And William Osler is quoted as saying that "human kind might be divided into three groups—men, women, and women physicians."

The story of Dr. Alma Dea Morani, the first woman to become certified as a plastic surgeon in the United States, is a typical one. After gradu-

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