BOOK REVIEW

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Drs. Ingram and Richardson have added a timely and informative book to the long list of titles on the subject of anticoagulant therapy. The large number of publications in this field reflects the growing interest and controversy which have characterized it.

The first of three main sections deals with fundamental studies on anticoagulant activity, thrombosis, and the "hypercoagulable state." The pharmacology of heparin and the coumarin-indanedione drugs are discussed in relation to their known sites of action on the coagulation mechanism. Distinctions between clots and thrombi are carefully explained. This is important since there is a tendency to think of these phenomena as identical. Although both may contribute to the formation of vascular occlusions, they probably have a different pathogenesis. Intravascular clotting, as in the defibrination syndrome, is defined as a widespread deposition of fibrin strands which probably formed in the blood as it circulated. Local factors affecting the intimal lining of blood vessels, which may lead to platelet clumping and eventual thrombosis, have been considered. Investigations of blood coagulation in relation to thrombosis have in general been unrewarding, at least in part because few can agree on what constitutes the "hypercoagulable state." Recent research on platelet adhesiveness and its possible contribution to thrombosis has been included. There is a discussion of the possible role of plasma lipids in coagulation, atherosclerosis and thrombosis. This is also an area beset with contradictions and conflicting results. Particularly timely is the section on acute intravascular coagulation, or the "defibrination syndrome." Clinical examples in which tissue material gains access to the circulation have been cited. Although many of these disorders are rare, increasing evidence that heparin may be effective in their management is presented. There is currently a great deal of interest in these syndromes and their treatment.

The section on the effects of anticoagulants on thrombotic processes is quite objective. It is pointed out, for example, that therapeutic doses of heparin would be unlikely to have any effect on platelet adhesiveness in vivo. Although heparin has been shown to prevent experimental thrombosis in animals, comparable doses cannot be administered to humans. It is not understood how, if at all, the anticoagulant effects of the coumarin-indanedione are beneficial in thrombotic conditions. Although it is true that they prolong survival of platelets in vivo and diminish their adhesiveness in vitro, these effects may not be strictly due to their anticoagulant properties. In the second main section of the book, indices of anticoagulant therapy are considered. Results of recent clinical trials in acute myocardial infarction are critically examined. There appear to be only a few instances in which anticoagulation is strongly indicated. Thromboembolic complications have been reduced since the introduction of anticoagulants, and their use where there is danger of venous thrombosis due to stasis is recommended. Problems in the evaluation of long-term prophylactic anticoagulant therapy after the initial episode have been discussed. Most benefit is likely to accrue during the first year, and it is doubtful whether treatment beyond 12 months is valuable. There are some areas of general agreement concerning the use of anticoagulants in cerebrovascular disorders. They are beneficial in recurring cerebral embolization from the heart, slowly progressing strokes, and transient ischemic incidents. Acutely developing or fully developed strokes should not be treated. Furthermore, long-term anticoagulants have no place in the management of cerebrovascular disease. In acute peripheral vascular occlusion, intravenous heparin is recommended as soon as the diagnosis is made. Anticoagulation should be considered for patients over the age of 50 who are bedridden with an immobilizing type of illness.
Finally, the book concerns itself with practical aspects of anticoagulant therapy. The incidence of bleeding as a complication appears to be quite variable with each reported series. The range is from 3 to 24 per cent, depending upon the size of the treated group. Dosage schedules, factors controlling the choice of drug, and the use of antidotes are lucidly presented. The management of patients on anticoagulants during intercurrent surgery is also outlined. The standard laboratory tests currently used in the control of anticoagulant therapy are discussed. These include the Quick one-stage prothrombin time, the "P and P" test, the Ware and Stragnell modification, and the thrombotest. Practical aspects of the diagnosis and management of the defibrination syndrome are given. It is emphasized that the clinical features of the disorder do not distinguish between diffuse intravascular coagulation and excessive fibrinolytic activity, each of which is treated in a different manner. More detail concerning the use of epsilon-amino-caproic acid would have been helpful.

In general, this book is well written, and one of the best features is its objectivity. From the technical point of view, there were only scattered typographical errors, and on casual checking five references were noted in the text which did not appear in the extensive bibliography. The book should be helpful in making decisions on the treatment of patients where the use of anticoagulants is debatable. It is recommended for all physicians who have occasion to use anticoagulant therapy.—Aaron J. Marcus
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