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Preface

It is increasingly obvious that all of the yearly advances in pediatrics cannot be contained in one volume if sufficient space is allowed to explain them in adequate detail. Nonetheless, certain events appear worth documenting. This volume is particularly filled with such landmark advances.

Explosion is an inadequate word to describe the advances in genetic technology. Laue and Rennert describe the basic techniques of this decade and expand by example practical approaches.

Fantastic developments are occurring in childhood immunizations. Reuman, Rathore, and Ayoub bring the latest information on what is available now and recommended schedules, what to expect in the near future, what is on the horizon, and the basis of developing new agents.

Frank, Bresnahan, and Zuckerman investigated a large number of infants born of cocaine-using mothers and find that the hysteria magnified by the media and some physicians is unwarranted. No "cocaine-baby" syndrome was detected; rather there appeared to be multiple ill effects from poor prenatal care fueled by the addicted mother. Addiction is explained, together with some suggestions for treatment.

Organ transplantation is a therapeutic measure that accounts for major utilization of hospital beds and of medical dollars. Effectiveness in prolonging life and in some, affecting cure, is unquestioned. In *Advances in Pediatrics,* volume 30, 1983, bone marrow transplantation was discussed. Now, 10 years later in this volume, Hong discusses the cures and also the problems of bone marrow transplantation. One is elated when reading of the successes, but cannot avoid the feeling, when reading the complications, that medical transplant practitioners of the present era will be viewed in the future with similar alarm and derision as medical bloodletting or high colonic enema therapists of the past are viewed by us.

The changing meaning of lead poisoning is documented by Needleman. Also mentioned is his personal tribulation related to political and economic interests in removal of lead exposure.

Alkalosis follows chloride depletion and was found to occur in infants fed a low-chloride formula. Infants who became alkalotic were noted to have developmental delay (Roy, *Advances in Pediatrics,* volume 31, 1984). Malloy attempts to determine whether delay also occurs in those who consumed the formula but did not develop alkalosis. Since many infants fed the soy-based formula had some prior difficulty, any noted delay had to be compared with those fed other soy formulas. It appears that those not becoming alkalotic have little or no differences from those fed other soy formulas.

Ellis and Nichols summarize reference body composition data and methods of determining body composition. Formerly an interesting research tool, body composition is recognized as important in evaluating obesity,

weight loss, athletic potential, growth hormone effects, aging, and osteoporosis.

Ashwal, Perkin, Thompson, Schneider, and Tomasi explore in detail cerebral blood flow and cerebral spinal fluid dynamics in children with meningitis. As development of antibiotics races against bacterial resistance and use of dexamethasone early in treatment finds it place, better understanding of the pathophysiology can be expected to bring further changes in therapy.

Separated from the basket of causes of mental retardation is the poorly understood but recently classified "Rett" syndrome. Iyama summarizes present knowledge including that of causes and directions for research, and she concludes with a plea for tolerance.

Balloons for occluding vascular lesions discussed by Rao in *Advances in Pediatrics*, volume 37, 1990, and parachutes for congenital heart lesions discussed by Landzberg and Lock in the present volume, confirm the advent of interventional cardiology. A new outlook is available for patients and physicians as decreased morbidity and mortality occur in children with previously horrendous outlook.

This volume contains three articles discussing significant advances in understanding and treating diseases of the kidney.

New diuretics with changing specificity are regularly introduced into the market. Together with use in high-risk infants and changing indications, Bailie carefully reviews the dos and don'ts of the most popular of these agents.

Advances in pathological techniques have led to more precise diagnosis of children with the nephrotic syndrome. Robson and Leung describe how these advances improve treatment and, equally important, improve prediction of course and outcome. They emphasize need of counseling parents and children afflicted with chronic diseases.

Treatment of the vasculitides affecting the kidney has undergone marked changes in the past decade. Alon, Warady, and Hellerstein document the changes with improved results and discuss the pathophysiology on which these are based. Their article here is a continuation of their discussion of the kidney in systemic disease. Their first article, The Kidney in Systemic Disease Part 1, appeared in volume 37 of *Advances in Pediatrics*.

Renal stones are relatively rare in children but their occurrence presents a challenge to the primary physician. Polinsky, Kaiser, Baluarte, and Gruskin present a clear, easy-to-follow approach to diagnosis, encompassing recent advances in understanding the pathogenesis of stone formation of diverse etiologies. Their suggestions for treatment are practical and frequently effective.

As anticipated by Holbrook and Christensen in *Advances in Pediatrics*, volume 38, 1992, erythropoietin is becoming a major boon in therapy. Dallman now documents the value of erythropoietin in decreasing the need for some transfusions in some prematurely born infants. More experience is needed.

Berlin has again covered pharmacologic advances. Since these reviews

have appeared regularly every 2 years in the even-numbered volumes, those volumes 30, 32, 34, 36, 38, and 40 provide an extensive review of most commonly used drugs and exposed toxins of children.

As always, your critiques and suggestions are welcome and appreciated.

Lewis A. Barness, M.D.

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