

Review of Literature

Introduction

In this review we intend to shed some light onto the endocrinology of growth through the study of growth promoting hormones (essentially growth hormone, thyroid hormones and prolactin) and the growth promoting factors, somatomedins. It seems that the hormones in the body of an individual work in a highly integrated and sophisticated manner in order to pursue the completion of ultimate growth. The hormones affect different parameters of growth or stimulate growth in their own individual mechanism but are ultimately affected by one another forming a unique and highly sensitive net of "communications". The manner in which they interrelate or interact with one another will be studied by reviewing the data of experimental studies in animals and tissue cultures and from the hormonal studies in patients with endocrine disorders. The aim of such a review is to draw possible conclusions as to what is actually happening in a growing child under physiological conditions.

In the following chapters of the review we intend to study the growth of a normal child, the other factors affecting his or her growth and finally the clinical methods of assessing growth in a child. Next we will review the problem of short stature, its causes in general with special emphasis on the endocrine causes of short stature and even more so, on growth hormone deficiency, being the hormone primarily concerned with the growth of a child. Finally, the effect of malnutrition on the statural growth of a child will be dealt with in a separate chapter in order to emphasize the importance of the nutritional status of a child with regard to its effect, not primarily on weight but more

so on height. The fact that long standing "masked" or "marginal" undernutrition, which is a common problem in our society, can cause growth delay will be studied with reference to the endocrine status in malnutrition.