

the main adrenal gland, are not associated with the notable genital development, hirsuties, and obesity seen in children. As rare exceptions to this rule, attention may be directed to Thornton's<sup>3</sup> case of a woman aged thirty-six years, who was covered all over with black, silky hair and had to shave her face, and to a somewhat similar case in a female lunatic aged thirty-two years (Richards), in both of which hypernephromas were present. In passing it is interesting to note the rarity of renal tumors of adrenal origin in children as compared with the incidence of these tumors in adults and with the incidence of hypernephromas in early life. But, although excessive genital development and growth of hair in a child should always suggest the existence of a cortical hypernephroma, it must be remembered that these striking signs may exist without any such lesion in the suprarenals (Guthrie and Emery).<sup>4</sup> As bearing on the connection between exaggerated cellular growth of the suprarenal cortex and the development of the genital organs, a few cases are on record in which suprarenal hyperplasia has been found in individuals with such excessive size of the clitoris that they were erroneously regarded as males. Further, enlargement of the suprarenals has been noted in animals during periods of sexual activity and pregnancy; and it has appeared to me that there is a close resemblance between the cells of the suprarenal cortex, on the one hand, and the luteal cells normally found in corpora lutea, and exceptionally in luteal cysts, on the other hand. This resemblance, both histologically and morphologically, has been insisted on by Mulon,<sup>5</sup> who, from observation on guinea pigs, speaks of the corpus luteum of pregnancy as a temporary cortical suprarenal. It is interesting to compare the developmental anomalies accompanying some cortical hypernephromas with acromegaly, which is usually associated with hyperplasia or adenomatous change in the anterior lobe of the pituitary gland. For, as Schäfer and Herring<sup>6</sup> point out, the anterior lobe of the pituitary and the cortex of the adrenal are alike in several particulars, namely, in the glandular character of their epithelium, in the physiological inactivity of their extracts, and in ensheathing collections of neuro-ectodermal cells (the posterior or infundibular lobe, and the adrenal medulla) which, on the contrary, possess extremely active physiological extracts. As bearing in a somewhat remote manner on the relation of the suprarenal cortex to the growth of the body it may be mentioned that evidence is accumulating to show that primary malignant growths of the cortex, like primary carcinomas of the thyroid, have a special tendency to produce metastases in bone (Sunder).<sup>7</sup> This association has also been independently noticed by Prof. Adami. This similarity of the thyroid is of interest in the light of the well-established influence of the thyroid on skeletal growth.