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Anterior Hypophysitis Associated with Autoimmune Disease [Summary]

Prominent features of organ-specific autoimmune diseases in man are the presence of otherwise unexplained chronic inflammation in the affected tissues and the tendency for such lesions to affect multiple organs in the same individual. For example, patients with idiopathic Addison's disease frequently have chronic thyroiditis and autoimmune gastritis.

Two patients have now been reported who had probable hypopituitarism associated with chronic anterior hypophysitis and with a second organ-specific autoimmune disease. That described by Goudie & Pinkerton (1962) was a woman aged 22 who apparently died of adrenal insufficiency 14 months after the birth of her second child. There was no hemorrhage or shock at the time of delivery and lactation was normal, but thereafter she did not resume normal menstruation. She had goitre and lassitude for a year before death. At necropsy the adenohypophysis was small and showed marked focal and diffuse lymphocytic infiltration without fibrosis or endotheloid follicles; the thyroid (100 grams) showed Hashimoto's disease. Hume & Roberts (1967) had a nulliparous patient aged 74 with hypopituitarism associated with milder lymphocytic infiltration of the adenohypophysis which was shrunken and densely fibrotic; pernicious anaemia and symptomless focal thyroiditis were also present. Unfortunately blood was not available for serological studies in either of these patients.

Preliminary studies on the sera of a small number of living patients with hypopituitarism from a variety of causes have not revealed pituitary antibodies by the precipitin technique with saline extracts of human pituitary, or by the indirect immunofluorescence technique with un-fixed human pituitary as antigen. Organ-specific antibody-like activity against pituitary has been reported in the serum of 18% of women seven days after childbirth and in one case of Sheehan's syndrome of five years' duration (Engelberth & Ježková 1965) but these findings remain to be confirmed. To obtain more direct evidence for the existence of autoimmune anterior hypophysitis studies will be required on the serum of further patients with unexplained hypopituitarism, particularly those with other organ-specific antibodies.

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Sperm-agglutinating Autoantibodies in Relation to Male Infertility

It is now well established that some infertile human males possess autoantibodies against spermatozoa. As was originally described by Wilson (1954), these autoantibodies agglutinate and sometimes immobilize the otherwise normal spermatozoa in the ejaculate. The agglutinated spermatozoa can no longer penetrate the cervical mucus, so that the patient is infertile.

Sperm agglutinins are present in seminal fluid as well as in blood plasma and they are specific for spermatozoa (Rümke 1954, Rümke & Hellinga 1959). Variation exists in the agglutination type. Most sera agglutinate the spermatozoa by their tails or by tails and heads, while some sera only agglutinate the heads. In general there is a parallel between serum titres and the inability of the patients' spermatozoa to invade the cervical mucus (Rümke & Hellinga 1959, Fjällbrant 1965). However, there are exceptions to this rule: some patients have strong autoagglutination with rather low serum titres, and occasionally a patient has only partial and slow-starting agglutination in spite of a high serum titre (Rümke & Hellinga 1959).

A macroscopic agglutination technique with normal sperm of various donors, as designed by Kibrick et al. (1952), was used by us to examine serum samples routinely (Rümke & Hellinga 1959). Out of 2,015 infertile males only 67 patients (3.3%) were found with titres of 1:32 or higher, whereas the serum of 416 fertile males and 124 unselected infertile women never possessed