AQUEOUS HUMOUR EXAMINATION
IN
GRANULOMATOUS IRIDOCYCLITIS

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With 7 fig.

The etiological differentiation of Iridocyclitis has to certain extent been achieved but there still remain a large number of cases which fall in the etiologically unknown group. BRÜCKNER (1919) attempted the differential diagnosis of the etiological agents of iridocyclitis in enucleated eyes by cytological means with some success. GILBERT & PLAUT (1921) and WOLF (1922) soon followed him. IRVINE and coll. (1942) devised a modified paracentesis method to obtain aqueous humour from the patients. VERREY (1954) and AMSLER (1955) singly and together laid the proper foundation of utilization of this procedure by an integrated bacteriological, serological, cytological and other approach. They achieved considerable success in this differential diagnosis. V. SALLMAN and coll. (1951) were rather sceptical about the usefulness of the procedure. We (1955) attempted to correlate the experimental and clinical findings and observed that it can serve to distinguish the bacterial from the bacterio-allergic types and the granulomatous from the non-granulomatous varieties besides the differentiation between various forms of the same group.

WOODS (1956) includes under the group of granulomatous iritis, the lesions produced even by bacterial allergy from bacteria like streptococci and staphylococci by Arthus or Schwartzmann phenomenon. We have kept them under a separate group in view of our opinion that clinical and cytopathological variations are considerable to enable their classification into a non-granulomatous bacterio-allergic type of lesion. In this study we have repeated our previous techniques. The aqueous smears have been stained by the Papanicolaou method for the ocular cells, Leishman's method for the infiltrative cells, the Gram's staining and the acid fast staining for differential bacterial recognition. In suspected cases of syphilis we have also done a dark ground illumination for the detection
of *Treponema pallida*. The aqueous has also been cultured wherever indicated. Serological tests have been employed for the syphilitic individuals.

To produce granulomatous iritis tubercle bacilli were used as infecting organisms. (i) To the first group of ten rabbits 0.01 cm of suspension of pure tubercle bacilli culture containing 500 organisms was injected into the anterior chamber of the right eye and 0.01 cm of normal sterile saline into the anterior chamber of the left eye. After development of iritis aqueous humour was examined at weekly intervals. (ii) To the second group of ten rabbits 0.01 ccm of a suspension of dead tubercle bacilli containing the same number of organisms as in the previous group was injected into the anterior chamber of the right eye. The injection was repeated after one week. After the development of iritis aqueous humour was obtained at weekly intervals. The left eye was dealt with as in the previous group.

We produced an allergic iridocyclitis after injecting dead staphylococci in the rabbits eye and found that there was an increase in protein and cellular content of the aqueous humour. Lymphocytes and monocytes were almost present in equal numbers (fig. 1). A few macrophages, a few eosinophils and a few polymorphonuclear cells were also seen. There was

Fig. 1

Cellular infiltrates in allergic Iridocyclitis.