

10 (1188)

**Histological study of the testes of guinea pigs showing lead blastophthoria. Preliminary report.**By **CARL VERNON WELLER, M.S., M.D.***[From the Department of Pathology, University of Michigan.]*

In an earlier report we have shown that the continued administration of small doses of lead produces a definite blastophthoric effect in male guinea pigs; and that the lead blastophthoria thus induced manifests itself in the offspring by a reduction of approximately twenty per cent. in the average birth weight, by an increased number of deaths in the first week of life and by a general retardation in development such that the offspring of lead-poisoned males often remain permanently underweight. The testes of these chronically lead-poisoned guinea pigs have now been examined in sufficient numbers to warrant a preliminary report.

In a majority of the cases examined no histological differences can be detected between the testes of lead-poisoned guinea pigs and those of normal controls. Spermatogenesis appears to take place along normal lines and at a rate which seems not unlike that in normal pigs. This observation is in no degree incompatible with a state of true blastophthoria since it is to be expected that if fertilization takes place at all, the spermatozoa will show no great variation from the normal as far as their appearance is concerned. The reason for the inferiority of the offspring is to be sought rather in qualitative changes in the germ plasm.

In a limited group of instances, in which the male guinea pigs became sterile during the administration of lead, histological examination of the testes shows a complete aspermatogenesis with marked atrophy and vacuolar degeneration of the germinal epithelium. There is an attempt at cell division which results in multinuclear giant cells, evidently comparable to spermatocytes, but division of the protoplasm appears to lag behind that of the nuclei and spermatids and spermatozoa are not produced.