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Histological changes in the testis of the Guinea pig during scurvy and inanition.

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The histological changes in the testes of guinea pigs fed a diet deficient in vitamin C were studied and compared with the conditions in guinea pigs of different ages on normal diet. The conditions in guinea pigs were also studied when the diet contained the three vitamins but inadequate food supply. The effect of the two deficient diets was to cause retardation of development in young animals, and degeneration of spermatozoa, spermatids and spermatocytes in older animals. In less severe cases only the early stages of spermatogenesis were affected. Signs of degeneration consisted of desquamation of germinal epithelium into the lumen of the tubules, presence of degenerating cells taking a deep acidophilic stain, and disintegration of the cytoplasm producing a reticular appearance. Sertoli cells were not affected. There was no hypertrophy of intertubular tissue or of interstitial cells. Variation in the amount of change in the testis was found to be parallel to that in the adrenal glands, and both seem to depend on the size of the animal and on the length of time it had been fed a scorbutic diet. Guinea pigs fed a normal diet after chronic scurvy possessed testes containing germ cells in all stages, although the proportion of tubules containing spermatozoa was considerably reduced.