Abstract

In this paper, the lacrimal and submaxilar glands of the new naked mutant mice known as et/et were compared to +/+ and heterozygous et/+ mice. Results showed that et/et mice present lower glandular lacrimal indexes (relative lacrimal gland weights) than +/+ mice (P = 0.0061). It was found that et/et and et/+ showed lower indexes than +/+ mice (P = 0.0002) when comparing glandular submaxilar indexes. When analyzing the influence of age on the glandular indexes in the et/et mice, it was found that the maximum index of the lacrimal glands occurred at an age of around 25 weeks, while the smallest occurred at around the 68th week. In as regards age and glandular submaxilar indexes, in et/et mice the maximum index was found in the 19th week, with the lowest in the 68th week of life. The males of the et/et group presented higher mean glandular lacrimal indexes than the females (10.093 vs 4.558), P = 0.0001, whereas no sex differences were found in the glandular submaxilar indexes, P = 0.132. When comparing absolute gland weights among different animal groups, the results were similar to those found when using relative gland weights (indexes). In the histopathologic study of the et/et, et/+ and +/+ glands, the et/et mice presented different degrees of leucocyte infiltration, which were moderate (comprised mainly of monocytes and maintaining architectural detail) after the 20th week of age, and very severe (abundant cell infiltrate and loss of parenchyma) by the 68th week; whereas et/+ and +/+ animals did not show infiltrated glands at any age. The et/et mice developed inflammatory exocrinopathy resembling that of patients with Sjögrens syndrome.

Keywords

ET/ET MICE, LACRIMAL GLANDS, SALIVARY GLANDS, EXOCRINOPATHY, XEROPHTHALMIA, XEROSTOMIA, SJÖGREN'S SYNDROME, AUTOIMMUNE DISEASE.