ACCUMULATION OF N-EPSILON CARBOXYMETHYL LYSINE IN RAT ORAL CAVITY TISSUES AND ORGANS CORRELATED WITH AGING

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Introduction: N-epsilon carboxymethyl lysine (CML), one of the major advanced glycation end-products (AGEs), is implicated in oral diseases and various general pathologies related to aging. Our purpose was to correlate, on an animal model, the expression of CML in the oral cavity and in various organs with the age.

Material and method: Tissue samples were harvested from the oral cavity and organs of 10 eight-month and 10 two-year old Wistar rats, both females and males. The specimens were microscopically analyzed in routine hematoxylin and eosin stain and immunohistochemical stain using the monoclonal antibody anti-CML NF-1G (Abcam, ab30917).

Results: The CML accumulation had various intensities for the different tissues and organs, and was higher in adult rats compared with the young individuals. There were no differences in CML expression between males and females.

Conclusion: CML had variable distribution in the tissues from the oral cavity and various organs and was correlated with the age of the animals. These findings suggest that CML is implicated in the pathogenesis of oral and general diseases, and could also be associated with aging.

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