Ultracytochemical localization of basal lamina anionic sites in the rat epithelial attachment apparatus

Oyarzún?Droguett, Alejandro

The basal lamina anionic sites of the epithelial attachment apparatus (EAA) were investigated at the electron microscopic level in adult rat periodontium. After 1M NaCl junctional epithelium detachment, an irregular and fluffy basal lamina?like structure appeared to cover the cementum surface. This structure reacted positively with polyethyleneimine (PEI), a strongly cationized ultrastruc?tural tracer, appearing to be composed of highly electron?dense microaggregates. Depending on section plane, double?tracked structures of undefined length were found within PEI precipitates and closely related to cementum collagen fibrils. After nitrous acid de?N?sulphation, 8 nm wide sets of two parallel lines were clearly identified. ?Double tracks?, i.e., sets of paired lines with peripherical PEI electron?dense material, were found to self?assemble to form dimers, clusters or more complex organizational patterns. From sensitivity towards nitrous acid oxidation and positive control observations, it