



CYTOPLASMIC GRANULES IN HUMAN  
ORAL AND VAGINAL  
EPITHELIUM

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CHAPTER IV	EXAMINATION OF SQUAMOUS EPITHELIAL CELLS BY PHASE CONTRAST MICROSCOPY . . . . .	82
CHAPTER V	THE INCIDENCE OF CYTOPLASMIC GRANULES IN BUCCAL EPITHELIAL CELLS . . . . .	95
	GENERAL DISCUSSION AND CONCLUSIONS . . . . .	122
APPENDICES		
	I Ribonuclease digestion technique . . . . .	128
	II Azure A stain . . . . .	129
	III Benzidine stain for haemoglobin . . . . .	130
	IV Examples of statistical methods . . . . .	132
	BIBLIOGRAPHY . . . . .	138
	ADDENDUM . . . . .	154
	ADDITIONAL REFERENCES . . . . .	167
	ACKNOWLEDGEMENTS . . . . .	168

SUMMARY

A survey of the literature reveals controversy concerning the occurrence, origin, and function of keratohyalin granules in the stratified squamous epithelium of the human mouth and vagina.

The aims of the present study were to establish the fact that so-called keratohyalin granules are present in the epithelium of the mucosal surfaces of the mouth and vagina, to suggest a possible origin of the granules, and to investigate any relationship between the incidence of the granules and degree of keratinization.

The subjects used in the investigation were human adults, infants, and fetuses.

Histological sections and mucosal smears of oral epithelium were examined with the light microscope following histochemical treatment. Oral smears were also examined by phase contrast microscopy and investigated with microbiological culture methods. Statistical analysis was carried out on the results of differential counts concerning the incidence of keratohyalin granules and the degree of keratinization in buccal smears.

Vaginal smears were examined with the light microscope following staining by the Papanicolaou method and by phase contrast microscopy.

The results proved that keratohyalin granules occurred in both oral and vaginal epithelium, and that the appearances were not due to pigments, staining artefacts, or micro-organisms.

Granules appeared to have their origin in the nucleus of the epithelial cell and their incidence bore no relationship to degree of keratinization. This last finding supports the concept that the keratohyalin granules are not directly involved in the process of keratinization but ultimately become an interfibrillary component of the keratinized cell.

This thesis is submitted in fulfilment of the requirements for the degree of Master of Dental Surgery, University of Adelaide. A year of full-time study, leading to the attainment of the Honours degree of Bachelor of Dental Surgery in 1961, fulfilled the requirements for the entry to candidature for the degree of Master of Dental Surgery.

The thesis contains no material previously submitted by me for a degree in any University, and to the best of my knowledge and belief it contains no material previously published or written by another person, except when due reference is made in the text.

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