



THE DERMATOPHYTES

WITH PARTICULAR REFERENCE TO THE ENDOTHRIX TRICHOPHYTA.

A STUDY

of

849 PATIENTS SUFFERING FROM TINEA.

A THESIS

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CONTENTS.

INTRODUCTION:

Reason for the study.	1
A summary of the study.	1
Declaration of originality.	4
Acknowledgements.	5
Publications.	6

PART A:

<u>CHAPTER I.</u>	GENERAL HISTORY OF SUPERFICIAL FUNGOUS INFECTIONS.	7
	Australian literature.	10
<u>CHAPTER II.</u>	ORIGIN OF THE PRESENT STUDY AND METHODS.	14
<u>CHAPTER III.</u>	THE MYCOLOGICAL MATERIAL.	18

PART B:

<u>CHAPTER IV.</u>	THE MICROSPORA.	
	Distribution and frequency.	24
	The mycological diagnosis of <i>M. canis</i> .	25
<u>CHAPTER V.</u>	MICROSPORUM CANIS INFECTION OF THE SCALP.	
	The natural history in Australia.	27
<u>CHAPTER VI.</u>	MICROSPORUM GYPSEUM.	
	History.	29
	Personal observations in South Australia.	31
<u>CHAPTER VII.</u>	OTHER DERMATOPHYTES.	
	Epidermophyton floccosum.	32
	Trichophyton mentagrophytes.	32
	Trichophyton rubrum.	32
	Trichophyton Schoenleinii.	33
	Trichophyton concentricum.	33

PART C:

<u>CHAPTER VIII.</u>	HISTORY OF THE ENDOTHRIX TRICHOPHYTA.	34
	The lack of unanimity on the clinical pattern.	37
<u>CHAPTER IX.</u>	THE CLINICAL FEATURES OF ENDOTHRIX TINEA ON THE BASIS OF 196 CASES STUDIED.	39
	Correlation of clinical and cultural findings.	41
	The diagnosis	44

III.

<u>CHAPTER X.</u>	EPIDEMIOLOGICAL CONSIDERATIONS OF ENDOTHRIX TINEA.	
	Age.	46
	Sex.	46
	Race.	47
	Case detection.	48
	Indirect evidence.	50
	Significance of multiple infection.	51
<u>CHAPTER XL.</u>	GRISEOFULVIN THERAPY OF TINEA CAPITIS.	
	Advent of griseofulvin.	52
	Treatment of endothrix infection.	53
	Treatment of M. canis infection.	55
<u>CHAPTER XII.</u>	PROBLEM OF ERADICATION OF ENDOTHRIX TINEA AMONG ABORIGINES.	57
	Results of therapy compared.	57
	The problem in North Africa compared.	58
<u>CHAPTER XIII.</u>	REVIEW AND CONCLUSIONS.	59
<u>REFERENCES:</u>		65
<u>APPENDIX:</u>	I. DETAILED TABLE OF 196 CASES OF ENDOTHRIX TINEA CAPITIS.	
	II. PUBLICATIONS.	

INTRODUCTION.THE REASON FOR THE STUDY:

During the term of a registrarship in the skin clinic at the Royal Prince Alfred Hospital, Sydney, I had an opportunity to gain a basic knowledge of the laboratory methods for the diagnosis of tinea. When I moved to South Australia there were no laboratory facilities for identifying pathogenic fungi. Because of this I performed these tests in my private practice and was able to initiate the routine culture of dermatophytes at the Institute of Medical and Veterinary Science and at the Adelaide Children's Hospital.

A SUMMARY OF THE STUDY:

The original work to be presented in this thesis can be summarized as follows:-

- i. The study was the first survey of the dermatophytes conducted in South Australia.
- ii. The study showed that Microsporum canis was the commonest cause of tinea capitis in South Australia.

This result was similar to my earlier work in New South Wales and to results published by other workers in Victoria and New South Wales. Attention given to the laboratory identification of atypical M. canis isolates has shown the rarity of Microsporum Audouini in Australia and has tended to correct the over-ready acceptance in Australia of a diagnosis of M. Audouini.

- iii. Tabulation of the duration of M. canis infections of the scalp has yielded more precise information on the natural history of this disease than was previously available in Australasia.
- iv. Microsporum gypseum has been isolated from a case of tinea in South Australia and I was able to grow this fungus from South Australian soils, showing that observations made in other parts of Australia are also applicable to South Australia.
- v. In addition to the anticipated isolation of the common dermatophytes affecting skin and nail, two exotic

species (Trichophyton Schoenleinii and Trichophyton concentricum) were isolated. These patients were studied and the results were published at a time when neither fungus had previously been described in Australia. During the course of the study it was shown for the first time that Trichophyton mentagrophytes infections are commonly contracted from kangaroos.

vi. The study confirmed the presence of Trichophyton tonsurans infections among the white population of South Australia. This was to be expected because numerous T. tonsurans infections among white persons have been previously recorded in Victoria and New South Wales.

vii. The most surprising result of this study was the discovery that the part-aborigines of South Australia were very commonly infected with endothrix trichophyta. The incidence of the disease has proved to be as high as in any part of the world. For the first time in Australia my study has shown that Trichophyton violaceum is not the rarity that was previously supposed. It remains a rarity among the white population except in Italian and Greek migrants but it is a very frequent cause of tinea among the part-aborigines of South Australia.

viii. The great frequency of both T. tonsurans and T. violaceum among part-aborigines gave me the opportunity to compare their pathogenicity. In contra-distinction to the world medical literature there was no significant difference in the clinical pattern of disease caused by these two fungi.

Endothrix tinea capitis among aborigines and part-aborigines showed clinical differences from the infections seen among white persons living in New South Wales and South Australia.

ix. Therapeutic studies with griseofulvin were undertaken in 1959. The results obtained in endothrix tinea capitis and M. canis infections of the scalp were presented at a time when the management of these conditions was a matter for conjecture.

x. It was concluded that although my studies gave information about the incidence of endothrix tinea capitis, the types

of causative fungi, the diagnosis and the treatment of the disease in South Australia, it has not solved the problem of its eradication. The main problem remains an administrative one among the governmental departments responsible for the care of aborigines and part-aborigines.