i. Declaration

I, Mercy Juliet Mkandawire declare that this research report is my own unaided work. It is being submitted for the degree of Master of Medicine in Internal Medicine in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

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Mercy J. Mkandawire

_______day of January, 2015
ii. Publications and presentations arising from this study

Abstract accepted for poster presentation at World Congress of Nephrology 2015.
iii. Abstract

Available literature on primary minimal change nephropathy (MCN) predominantly reflects Western and Asian populations, with little data describing the disease in black patients. We therefore studied the demographic and clinical profile of patients presenting with MCN at the Witwatersrand Academic Complex.

The results of 1,618 renal biopsies performed at our centre between 2001 and 2010 were reviewed; 47 patients with MCN were identified (prevalence of 2.9%). The patients were predominantly of black race (83%), the male : female ratio was 1.04:1 and the mean age was 31.8±12.1 years. The majority of patients (90%) fitted the criteria for the nephrotic syndrome. 18% of patients had elevated serum creatinine levels and 6.4% had associated hypertension. An association was found between gender and age; with a predominance of males amongst younger patients (less than 30 years) compared to a predominance of females amongst the older patients.

Records of treatment and outcomes were available for 28 patients, all of whom received initial corticosteroid therapy (average dose of prednisone 0.8mg/kg/day). The average duration of therapy was 29 weeks. 57.1% achieved remission with no further relapse. No clinical or demographic parameters were identified that predicted response to corticosteroid therapy. 39.2% of patients had probable steroid dependance/resistance. Of these patients, 58.3% had a single relapse and 41.7% had double relapses. The mean time to relapse was 27.8±19.4 months with 83% of patients relapsing within 48 months; the mean time to relapse was longer in males (39.3±17.5 months) as compared to females who relapsed in 18±16.9 months, which was significant at the 10% level ($P = 0.09$).
MCN is rare amongst Black Africans but should be considered in the differential diagnosis of nephrotic syndrome. The disorder in these patients may be less responsive to corticosteroids and a longer course of therapy may be required to induce remission. Males may be more likely to remain in remission for a longer time period.
iv. Acknowledgements

My sincere gratitude goes to:

My supervisors Professor S. Naicker and Dr Malcolm Davies for their invaluable guidance, encouragement and assistance with the study and the completion of this research report.

Colleagues in the Departments of Nephrology of the Witwatersrand Academic Complex and the National Histopathology Laboratory Service for making this study possible.
## v. Contents

1. Introduction 1
   1.1 Background 1
   1.2 Epidemiology 4
   1.3 Pathogenesis 7
   1.4 Diagnosis 11
      1.4.1 Clinical features 11
      1.4.2 Histopathology 13
   1.5 Treatment 16
   1.6 Prognosis 19
   1.7 Rationale for study 19
   1.8 Hypothesis and Aims 20
      1.8.1 Hypothesis 20
      1.8.2 Aims and Objectives 20
2. Methods and Material 21
   2.1 Study design 21
   2.2 Selection of patients 22
   2.3 Inclusion criteria 23
   2.4 Exclusion criteria 23
   2.5 Statistical analysis 24
3. Results 25
   3.1 Prevalence 25
   3.2 Demographic data 25
   3.3 Treatment outcomes 31
4. Discussion 37
5. Conclusions 43
6. Limitations 44
7. Appendix 45
   7.1 Data collection sheet 45
   7.2 Ethics clearance certificate 46
   7.3 Permissions 47
8. References 48
vi. List of Tables

Table 1. Secondary Causes of Minimal Change Nephropathy 2
Table 2. The Trend of Prevalence of Minimal Change Nephropathy in Africa 5
Table 3. Relative Frequency of Presenting Clinical Features in Patients with MCN 13
Table 4. Baseline Clinical Characteristics of 47 Patients with Minimal Change Nephropathy 26
Table 5. Comparison of Presenting Characteristics by Gender 28
Table 6. Comparison of Presenting Characteristics between Age Groups 29
Table 7. Comparison of Presenting Characteristics between Race Categories 30
Table 8. Comparison of Gender and Race vs Age in Patients presenting with Minimal Change Nephropathy 31
Table 9. Comparison of Race vs Gender in Patients presenting with Minimal Change Nephropathy 31
Table 10. Association between Clinical Characteristics and Relapse 32
Table 11. Remission Intervals 34
vii. List of Figures

Figure 1. Ultrastructure of the Glomerular Capillary Wall 7
Figure 2. The Glomerular Filtration Barrier 9
Figure 3A. Light Microscopy of Normal Glomerulus 14
Figure 3B. Light Microscopy of Minimal Change Nephropathy 14
Figure 4. Electron Microscopy in Minimal Change Nephropathy 15
Figure 5. Age Distribution of Patients with Minimal Change Nephropathy 27
Figure 6. Comparison of Albumin and UPCR by Gender 28
Figure 7. Comparison of Albumin and UPCR levels between Age Groups 29
Figure 8. Time to First Relapse 33
Figure 9. Remission period according to Gender 35
Figure 10. Remission profiles according to Age Groups 36
Nomenclature

ACE – Angiotensin Converting Enzyme
ARB – Angiotensin Receptor Blocker
CMJAH – Charlotte Maxeke Johannesburg Academic Hospital
FP – Foot Process
FSGS – Focal Segmental Glomerulonephritis
GBM – Glomerular Basement Membrane
GPF – Glomerular Permeability Factor
HJH – Helen Joseph Hospital
HIV – Human Immunodeficiency Virus
IgAN – IgA Nephropathy
MN – Membranous Nephropathy
MCGN – Mesangiocapillary Glomerulonephritis
MPGN – Mesangioproliferative Glomerulonephritis
MCN - Minimal Change Nephropathy
MMF – Mycophenolate Mofetil
NHLS – National Health Laboratory Service
NSAIDS – Non Steroidal Anti Inflammatory Drugs
SLE – Systemic Lupus Erythematous
UPCR – Urine Protein:Creatinine Ratio