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THE EPIDEMIOLOGY OF MOTOR NEURON DISEASE IN SCOTLAND 1989-90.

A PROSPECTIVE STUDY OF INCIDENCE, CLINICAL FEATURES AND PROGNOSIS

AND INCORPORATING A CASE CONTROL STUDY OF ANTECEDENT

ENVIRONMENTAL FACTORS.

A thesis submitted to

The Faculty of Medicine, University of Auckland, New Zealand

for

The Degree of Doctor of Medicine, 1992.

by

Andrew Martin Chancellor BHB, MBChB, FRACP

To

Patricia and Elaine

"Somehow in the race for success in science, we are leaving behind the patient. There is no inherent competitiveness or reciprocity between the science and art of medicine. Without a knowledge of science, a compassionate wish to improve the health of mankind is meaningless...The increased complexity of technology and diagnostic and treatment options makes even more critical the physician's skill in managing illness and the art of communicating with patients and their loved ones. There but for the grace of God go we all, for all of us and our families are or will eventually become patients."

Louis R. Caplan¹

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LIST OF COMMONLY USED ABBREVIATIONS

MND	Motor neuron disease
ALS	Amyotrophic lateral sclerosis
PBP	Progressive bulbar palsy
PMA	Progressive muscular atrophy
PLS	Primary lateral sclerosis
NCS	Nerve conduction studies
EMG	Electromyography
CT	Computed tomographic scan
MRI	Magnetic resonance imaging
OPCS	Office of Population Censuses and Surveys
SHIPS	Scottish hospital in patient survey
ISD	Information and statistics division of the Common Services Agency for the Scottish Health Service
SMNDA	Scottish Motor Neuron Disease Association
SMNDR	Scottish Motor Neuron Disease Register
RR	Relative risk
OR	Odds ratio
CI	Confidence interval