PRESCRIBING PATTERNS OF SELECTIVE AND NON-SELECTIVE ANTI-INFLAMMATORY DRUGS IN THE TREATMENT OF RHEUMATOID ARTHRITIS

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A research report submitted to the Faculty of Health Sciences, University of Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Science in Medicine in Pharmacotherapy

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DECLARATION

I, Menicksha Beeka, declare that this research report is my own work. It is being submitted for the degree of Master of Science in Medicine in Pharmacotherapy 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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…… day of October 2007

DEDICATION

To my family for their encouragement and my friend Dhivendran for his support through out the research as a whole.

ABSTRACT

All members registered on the managed care database for the chronic condition Rheumatoid Arthritis (RA), for the period 01 January 2003 to 30 June 2003, were evaluated to determine the prescribing pattern of the cyclo-oxygenase (COX) II inhibitors and non-selective non-steroidal anti-inflammatory (NSAIDs). A total of 2818 members were registered on the managed care database of the chronic condition RA and 1372 members were identified as using COX II inhibitors and 827 members were using non-steroidal anti-inflammatory (NSAIDs). The prescribing frequency determined for the COX II inhibitors were 48.60% and 29.35% for the NSAIDs. The members identified as either using a COX II inhibitor or a NSAIDs were divided into two groups. The prescribing patterns of each group such as age, gender, co-morbid conditions, concomitant medication use and frequency were analysed and compared to the national institute of clinical excellence (NICE) and the South African Rheumatism and Arthritis Association (SARAA) guidelines for the appropriate prescribing of the COX II inhibitors. Celecoxib was the most frequently prescribed COX II inhibitor accounting for 46% of all the COX II inhibitors identified and diclofenac was the most frequently prescribed NSAID accounting for 34% of all the NSAIDs prescriptions. COX II inhibitors were prescribed more frequently to females with a mean age of 55 years than males. A similar prescribing trend was found with the NSAIDs. The COX II inhibitors were frequently prescribed to patients over the age of 56 with co morbid gastro-oesophageal disease and concomitant warfarin and steroid use. The prescribing patterns found in the managed care environment were similar to those recommended by the NICE and SARAA guidelines. The managed care data showed that the COX II inhibitors, which are supposed to have less gastric adverse side effects, were frequently used in combination with gastro-protective agents (GPA's).

This study indicates that even though COX II inhibitors were prescribed more frequently than NSAIDs in the managed care environment the recommended clinical guidelines and protocols employed by the managed care environment were adhered to. However, there

is a need to closely monitor patients on concomitant GPA's treatment and COX II inhibitors.

This study helped to evaluate the current prescribing patterns of COX II inhibitors in the managed health care environment. This study confirmed that guidelines and protocols were adhered to. These are excellent tools to be used in the managed health care environment to ensure effective and appropriate prescribing.

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LIST OF ABBREVIATIONS

CABG	Coronary Artery Bypass Surgery
CDL	Chronic Disease List
CLASS	Celecoxib Long-Term Arthritis Safety Study
CMS	Council for Medical Schemes
COX 11	Cyclo-oxygenase inhibitors
CSI	Cox-2 Specific Inhibitor
CSM	Committee on the Safety of Medicines
CV	Cardiovascular
DMARDs	Disease Modifying Agents
DSP	Designated Service Provider
EMEA	European Agency for the Evaluation of Medical Products
FDA	Food and Drug Administration
GI	Gastrointestinal
GORD	Gastro-oesophageal reflux disease
GPA's	Gastro-intestinal agents
ICD-10	International classification of Disease, Tenth Edition
MCC	Medicine Control Council
MELISSA	Meloxicam Large-Scale International Study Safety Assessment
NICE	National Institute of Clinical Excellence
NSAIDs	Non-steroidal anti-inflammatory drugs
OA	Osteoarthritis
OTC	Over-the-Counter
PMB	Prescribed Minimum Benefit
RA	Rheumatoid Arthritis
RF	Rheumatoid Factor
SARAA	South African Rheumatism and Arthritis Association
SELECT	Safety and Efficacy Large-Scale evaluation of COX inhibiting therapies
UK	United Kingdom
US	United States
VIGOR	Vioxx Gastrointestinal Outcomes Research
WHO	World Health Organisation