EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

EVALUATION OF THE IMPACT OF A PHARMACEUTICAL CARE SERVICE OFFERED TO ATHEROSCLEROSIS PATIENTS WITHIN AN AMBULATORY SETTING

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ABSTRACT

The objectives of the study were to evaluate the impact of a newly developed pharmaceutical care services directed to atherosclerosis patients attending an out-patient setting. A total of 80 patients participated in the study and were randomly divided into two equal groups, Group A and Group B. The study was carried out over three phases. In phase 1, Group A patients were assessed and offered a pharmaceutical care session. Group B patients were assessed but no pharmaceutical care session was delivered. At phase 2, group A patients were re- assessed. Group B patients were re-assessed a second time and a pharmaceutical care session was offered to Group B patients. At phase 3 both groups were re-assessed a third time. The newly developed individualized pharmaceutical care service provided by the pharmacist led to an improved quality of life as measured by the health-related quality of life questionnaires.

KEYWORDS: Pharmaceutical care, quality of life, atherosclerosis, drug therapy problems, pharmacist contribution.

INTRODUCTION

Atherosclerosis is the most common form of arteriosclerosis, which is a general term for several disorders that cause thickening and loss of elasticity in the arterial wall. Atherosclerosis is also the most serious and clinically relevant form of arteriosclerosis because it causes coronary artery disease and cerebrovascular disease.[1,2]

Atherosclerosis can affect all large and medium-sized arteries, including the coronary, carotid, and cerebral arteries; the aorta; its branches; and major arteries of the extremities. It is the leading cause of morbidity and mortality in the US and in most developed countries. In recent years, age-related mortality attributable to atherosclerosis has been decreasing, but in 2016, cardiovascular disease (CVD), primarily coronary and cerebrovascular atherosclerosis still caused about 18 million deaths worldwide. Atherosclerosis is rapidly increasing in prevalence in developing countries, and as people in developed countries live longer, incidence will increase. Atherosclerosis is the leading cause of death worldwide.[4,5,6]

The current management of atherosclerosis therefore focuses on early aggressive treatment using disease modifying agents and biological agents early on to slow the disease progression if not to stop disease progression and afford remission. Patient safety is a major feature in management decisions. The increasing effectiveness of drug therapy in current disease management is brought about by new classes of agents acting at a fundamental inflammatory level ('biologicals') and by earlier more aggressive treatment to markedly reduce the rate of progression if not stop disease progression in certain instances. Treatment must be individualized, and patients helped to be actively involved in their own management and monitoring for effectiveness and safety. This could be achieved through a pharmaceutical care service.[8,9]

The context above raises questions about how to achieve optimal care within a multidisciplinary setting in which specialist pharmacists are providing new services requiring networking arrangements to underpin the quality of care as the patient moves between clinical settings, home, hospital, and clinic. The pharmacist input has been developing over the past seven years via inpatient services. The aim of this study was to evaluate the impact of a newly developed pharmaceutical care service within a multidisciplinary outpatients service.[10,11,12]

MATERIALS AND METHODS

A pharmaceutical care consultation led to the identification of pharmaceutical care issues. The session focused on determining whether all patient's drug therapy was the most appropriate, safe, effective, and conveniently available for the patient During the

pharmaceutical care consultation, the clinical pharmacist identified pharmaceutical care issues. Actual drug therapy problems are problems which are present and hence need to be resolved immediately whereas potential drug therapy problems are problems which are not yet present, but which might arise in future, and which could be avoided if the correct action is taken. The category non-drug therapy problems were added to the list to accommodate pharmaceutical care issues which were not directly related to drug therapy but relied on patient's perception, information on treatment or the need of other help from other health care professionals. Actions (checks or changes) needed to resolve each care issue problem were documented in the care plan within the patient's medical file.

RESULTS AND DISCUSSION

For group A patients the results indicate that there was an improvement in the quality of life of the patients reflected by a decrease in the health assessment questionnaire score which occurred following the pharmacist's intervention during the pharmaceutical intervention at Phase 1. This improvement in the quality of life of the patients increased over time (Phase 3) meaning that the impact of the pharmacist's intervention through individualized pharmaceutical care showed a further improvement in the quality of life of patients on a longer term.

Group B patients registered a statistically significant improvement in their health assessment questionnaire score following a pharmaceutical care session which mirrors the fact that pharmacist intervention improves quality of life. The impact of the pharmacist's contribution after 11 months resulted in an improvement of quality of life. However, for some domains namely physical function and role emotion this impact may take longer to result in an improvement. The results from Group B patients mirrored those of Group A.

CONCLUSION

Pharmaceutical care services offered within out-patient clinic multidisciplinary team can help to improve the patients' quality of life. This study has confirmed the positive impact of the pharmacist intervention within this multidisciplinary team on the patients' quality attending the out-patient clinic. This has been confirmed in other studies in other areas such as in the management of cardiovascular patients and diabetes patients18-23. Processes to identify patients who would require pharmaceutical care services within the setting may need to be identified in the scenario that the pharmaceutical care services are offered to all patients attending the clinic. Research to standardize the pharmaceutical care services is now being undertaken to ensure a harmonized evidence-based quality service.

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