



**RELATIONSHIP BETWEEN HYPERTENSION AND ANEURYSM: A STUDY DONE AT
A PHARMACEUTICAL CARE CENTRE**

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Article Received on 30/04/2024

Article Revised on 20/05/2024

Article Accepted on 10/06/2024

ABSTRACT

Hypertension is one of the leading risk factor for cardiac diseases. High blood pressure (hypertension) is one of the leading cause of death, causing over 7.5 million deaths and 57 million cases of disability all over the world. It manifests through entire organ systems, including the heart it self. Features of hypertensive heart disease include left ventricular hypertrophy, diastolic and systolic heart failure. Hence, this study was conducted in order to investigate the relationship of hypertension with incidence of aneurysm on clinical basis. This study is a cross sectional study, involving patients from a pharmaceutical Care Centre in Pola de Allande (Asturias), Spain. A total of 78 patients participated in the study. In this study, we found that 82,5% of patients with hypertension develop aneurysm and that hypertension showed significant relationship to the incidence of aneurysm.

KEYWORDS: Pharmaceutical care, quality of life, Hypertension, Aneurysm, pharmacist contribution.

INTRODUCTION

An aneurysm is a bulge caused by a weakening of the blood vessel wall. It can happen in any blood vessel, but is seen more often in arteries.

Aneurysms can be harmless. It probably won't cause you any problems as long as it doesn't rupture. Sometimes aneurysms burst because the vessel wall is weakened. This can be very dangerous, causing bleeding and even death. Aneurysms can occur anywhere. But there are 2 main types that are very serious: aortic aneurysms brain aneurysms (also called cerebral aneurysms).

Aortic aneurysms occur in your aorta. This is the main artery that carries blood from your heart to the rest of your body. Aortic aneurysms can affect the part of the aorta in the chest (thoracic aortic aneurysm) or the abdomen. Aneurysms can occur at any age but are more common in adults.^[1,2,3,4,5]

What causes an aneurysm? In some people aneurysms are congenital — that is, you are born with them. Aneurysms are also more common in some families.

Aneurysms are often due to a gradual weakening of the wall of an artery or vein. Your risk of some types of aneurysms may be increased if you: are a smoker, have high blood pressure or have high cholesterol.

An aneurysm can be caused by an accident or injury that damages the artery or vein. This could be a head or chest injury. It can also sometimes be caused by an infection.

They can also occur with certain medical conditions such as: atherosclerosis (hardening of the arteries), polycystic kidney disease, some connective tissue disorders.^[6,7,8,9]

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.

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

In our study, we found that the number of male patients (74%) exceeds and almost double the number of female patients (26%). Cardiovascular diseases (CVDs) are considered more common in male. In a study conducted by Connor et al and Miller R et al, it is postulated to have association with unhealthier lifestyle of men (higher stress, higher consumption of alcohol and smoking cigars) as well as the fact that men pay less attention to healthy diet including routine consumption of vegetables and fruits. Women are considered more fortunate due to oestrogen which naturally lessen the risk of women getting CVDs. In a study conducted by Wellman GC et al, they explained that oestrogen enhance nitric oxide (NO) production by the vascular endothelium probably through enhanced production of enzyme NO synthase. In a similar study conducted by Julian et al, it was shown that through population of above 45 years of age, risk of getting CVD in both men and women is close to 1.5 : 1. This suggests that degenerative process, lifestyle, and baseline condition in each gender contribute to larger proportion regarding how more likely an individual to get CVDs.^[10,11,12]

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.

In present study, we found that 85.7% of patients with hypertension develop aneurysm and that hypertension showed significant relationship to the incidence of aneurysm. Further analysis showed that hypertension class has no significant correlation with the incidence of aneurysm, thus indicating that there is no proven consistency between hypertension class and. This indicates that regardless the degree of hypertension, an

individual may develop, therefore, this issue must also be seriously addressed along with controlling blood pressure in the extent of hypertension management.

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