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Local prevalence of Peripheral Vascular Disease

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Introduction

Peripheral vascular disease (PVD) of the lower extremities can result in mortality and significant morbidity including chronic foot ulcerations, gangrene and infection. Podiatrists often have to tackle with the manifestations of PVD in their daily practices. Early recognition or screening of PVD should be beneficial in producing better surgical outcome, avoiding devastating foot complications and leads to a better quality of life for patients. However, regular podiatrist screening of PVD is not a usual practice in the inpatient hospital setting. Local data about the prevalence of PVD is also limited. Thus, this study aims to identify the prevalence of PVD for elderly in the inpatient hospital setting, in order to estimate the relevant service gap and demands in Hong Kong.

Objectives

The primary objective of this study is to investigate the prevalence of PVD in the elderly population at Tseung Kwan O Hospital (TKOH), by using Doppler ultrasonography to measure ankle branchial index (ABI).

Methodology

From March 2016 to January 2017, in collaboration with Geriatric Unit in TKOH patients aged 60 and above were invited to join the survey. Clinical assessment was performed by geriatricians, followed by a podiatry lower limb vascular assessment including ABI measurement for each candidate. Severity of PVD were classified as follow - ABI value of > 0.9 was defined as borderline PVD, ABI value of 0.71-0.9 indicated mild PVD while ABI value of 0.41-0.70 indicated moderate PVD. An ABI value of less than 0.4 was classified as severe PVD.

Result

The primary objective of this study is to investigate the prevalence of PVD in the elderly population at Tseung Kwan O Hospital (TKOH), by using Doppler ultrasonography to measure ankle branchial index (ABI). A total of 199 elderly patients with a mean age of 80 were included in the current study. In which 42.7% had smoking history and 43.2% had diabetes mellitus(DM). Among all subjects, 23.1% were found to have PVD and 2 of them had severe form with ABI less than 0.4. However only 7 out of these 46 PVD patients were symptomatic with claudication or rest pain. Univariate analyses identified that (1) hyperlipidaemia, (2) poor renal function – creatinine clearance, and (3) old age, were associated with PVD. Regression model further found that hyperlipidemia was the most significant risk factor for PVD, with an odds ratio of 1.93. Interestingly, the collected data did not show any association between smoking history, and DM, and PVD. From podiatry perspective, early and regular screening of PVD in the elderly is important and warranted in preventing devastating foot complications in them. Multidisciplinary collaboration can definitely be beneficial in the early detection and management of PVD.