Quality of life among Patients with Acute Coronary Syndrome in Malaysia

Soraya Azmi, MPH, MD[1,2,*], Adrian Goh, MEc, BEc[1,2], Alan Fong, MRCP, MBChB[3,4,5],
Lawrence Anchah, PhD, MPharm, BPharm[3]

[1]Azmi Burhani Consulting, Petaling Jaya, Malaysia; [2]Veras Research, Petaling Jaya, Malaysia; [3]Sarawak General Hospital Heart Centre, Sarawak, Malaysia; [4]Clinical Research Centre, Sarawak General Hospital, Sarawak, Malaysia; [5]Faculty of Medicine and Health Sciences, Universiti Malaysia, Sarawak, Malaysia

A B S T R A C T

Objectives: This study's objectives were to estimate the quality of life (QOL) of Malaysian patients with acute coronary syndrome (ACS) during admission and at 12 months, to explore the factors associated with the QOL, and to compare utility scores derived from tariffs from local and foreign populations. **Methods:** Data collected from patients with ACS between 2008 and 2009 for a study on cardiac rehabilitation at the Sarawak General Hospital were used for this study. QOL data were obtained using a validated version of the EuroQol five-dimensional questionnaire at baseline and at 12 months. Health utility scores were calculated using visual analogue scale scores and utility tariffs from Malaysia and the United Kingdom. **Results:** Data from 104 subjects from the earlier study was used. The mean age was 56.1 years, with 88.5% being men. The mean hospitalization duration was 6.3 days. The mean utility score was 0.75 at baseline and 0.82 at 12 months. There was a statistically significant improvement in utility

from baseline to 12 months based on the Malaysian tariff (P = 0.014) but not with the UK tariff (P = 0.086). The QOL of patients was associated with sex and diagnosis of ST-segment elevation myocardial infarction. **Conclusions:** Our results showed that there was a significant improvement in the QOL from baseline to 12 months. Only sex and diagnosis affected the QOL score at baseline because of limited variables available for testing. It also reconfirms the importance of applying the appropriate, country-specific utility tariffs in QOL studies. Despite limitations, the study is useful toward describing QOL among a group of Malaysian patients with ACS.

Keywords: acute coronary syndrome, EQ-5D, Malaysia, quality of life, utility.

Copyright © 2015, International Society for Pharmacoeconomics and Outcomes Research (ISPOR). Published by Elsevier Inc.

Introduction

Acute coronary syndrome (ACS) is one of the leading causes of morbidity and mortality globally, as well as in Malaysia [1–4]. In 2012, it accounted for 24.7% of all recorded deaths in the country [3]. Diseases of the circulatory system also represent a significant burden to the nation's health system, with 7.4% of hospitalizations [3]. These rates are poised to rise as disease patterns in this middle-income developing country become more similar to those of developed countries [5].

Commonly known as a "heart attack," ACS occurs when there is obstruction of the coronary arteries resulting in restricted blood flow to the heart [6]. It can be classified into three intensity categories: unstable angina (UA); non–ST-segment elevation myocardial infarction (NSTEMI), in which coronary arteries are partially or intermittently occluded; and ST-segment elevation myocardial infarction (STEMI), in which there is full arterial occlusion [6–9].

As can be expected, patients with or recovering from ACS have poorer quality of life (QOL) [10,11]. Management strategies that help patients gain clinical and QOL improvements are preferable over others; therefore, understanding the factors that affect the QOL is helpful [12]. QOL outcomes may also be prognostic in predicting subsequent morbidity and mortality in patients with coronary disease [13]. Studies that have reported QOL among patients with ACS are mostly from developed countries. Among the demographic and clinical factors that have been identified to have an impact were age [14,15], sex [14–18], a previous cardiovascular (CV) event [16,19], angina severity [16], type of ACS [18,20], depression [16,17,21], and physical functioning [15,18,19]. From Malaysia, a study by Chin et al. [4] reported that patients' age, percutaneous coronary intervention (PCI), and fibrinolytic therapy were factors associated with patient mortality but did not report QOL-related factors.

The EuroQol five-dimensional questionnaire is a five-question descriptive system QOL instrument that also allows calculation of