



Service Priorities and Programmes
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Optimizing Blood Pressure Management – Introduction of Ambulatory Blood Pressure Monitoring Service in General Outpatient Clinics in Hong Kong West Cluster

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Introduction

Blood pressure (BP) measurements at the doctor's office are conventionally used for diagnosis and monitoring of hypertension. However, there have been concerns over the reliability of clinic BP measurements (1). Compared to clinic measurement, ambulatory BP has better correlation with cardiovascular outcomes and end organ damage (2). In fact, ABPM is advocated as the gold standard for diagnosis of hypertension in the NICE 2011 Hypertension Guideline (3).

Objectives

ABPM service has been introduced to GOPCs in Hong Kong West Cluster since July 2012. It aims to confirm the diagnosis of hypertension and to monitor BP control in hypertensive patients who have been labeled as having 'white-coat' effect.

Methodology

Any patient with marked discrepancy between clinic and home BP over two clinic visits ($>20\text{mmHg}$ for systolic and $>10\text{mmHg}$ for diastolic values) can be referred for ABPM. Subjects with acute illnesses, stressful life events or unstable psychiatric conditions are excluded. Patients would wear a mobile monitor which measures BP automatically at 30-minute interval for 24 hours. Hypertension is defined by daytime average $\geq 135/85\text{ mmHg}$ (for non-diabetics) or $\geq 120/75\text{ mmHg}$ (for diabetics) and/or night time average $\geq 120/70\text{ mmHg}$ (4).

Result

66 patients were referred for ABPM between July 2012 and January 2013. They ranged from 25 to 86 years old with a mean age of 61 (SD 10.6). There were 23 males and 43 females. 32 subjects labeled as having white-coat hypertension were referred for confirmation of diagnosis. Only one had genuine white-coat hypertension and the remaining 31 (97%) were found to have true hypertension. 27 of these patients were followed up among which 23 were started on anti-hypertensive drugs. 34 hypertensive patients with either normal or borderline home BP but high clinic BP were referred for BP monitoring. Only three had true white-coat effect while 27 (79%)

had suboptimal BP control. 18 of them were followed up among which 12 had anti-hypertensive drugs initiated or stepped up. The results suggested that a large proportion of patients with marked discrepancy between clinic and home BP measurements in fact had true hypertension or suboptimal BP control. This service has shown that ABPM is useful when the diagnoses of white-coat hypertension or so-called white-coat effect on BP in hypertensive patients are in doubt. ABPM reveals the true BP in patients so that physicians can manage accordingly and provide the best medical care to optimize BP control thus reducing mortality and morbidity associated with hypertension. References: (1) White WB. Ambulatory blood pressure monitoring in clinical practice. *N Engl J Med*. 2003;348:2377-2378. (2) Verdecchia P. Prognostic value of ambulatory blood pressure: current evidence and clinical implications. *Hypertension*. 2000;35:844-51. (3) National Institute for Clinical Excellence. CG127 Hypertension: full guideline. [Online] 2011. Available from: <http://guidance.nice.org.uk/CG127/Guidance> [Accessed: 16th February 2013] (4) O'Brien E, Coats A, Owens P, Petrie J, Padfield P, et al. Use and interpretation of ambulatory blood pressure monitoring: recommendations of the British Hypertension Society. *BMJ* 2000;320:1128–34.