PCV62

HYPERTENSION CLINIC AND HYPERTENSION SPECIALIST IS A COST-EFFECTIVE TOOL FOR THE DISEASE CONTROL IMPROVEMENT IN BELARUS

Golubev S
Vitebsk Regional Center for Refractory Hypertension, Vitebsk, Belarus

OBJECTIVES: Evaluate a new service for refractory hypertension (RH) management in Belarus, an Eastern European country with a significant rise in cardiovascular morbidity, mortality, and the highest hospital discharge rate for hypertensive emergencies in Europe. **METHODS:** One hundred cases of ambulatory patients with RH consulted during 2003 at Vitebsk Regional Center for RH (RH-Center created in October, 2002) were retrospectively analyzed, including adherence to and effectiveness of a recommended treatment regimen during a 6-month period. The clinical practice at the RH-Center differs from the routine one in several technologies, including screening for reasons of refractory states performed by a qualified hypertension specialist; blood pressure (BP) and arterial compliance monitoring; patient's quality of life, social stress and support testing to control the adherence level. **RESULTS:** In the patient sample studied, the recommended treatment regimen was preserved in 67 cases, and in 43 (64%) the treatment effectiveness was judged as sufficient (systolic BP change by 10% or more). In the last 33, the recommended regimen was substantially changed by general practitioner (10 patients) or by patient himself (23 cases), lack of grounded reasons for that being registered in 5 and 20 cases, correspondingly. Rate of patients' applying for emergency service and hospitalization both in adherent and non-adherent portions of the sample was significantly lower compared to a 6-month period preceding the first RH-Center visit. **CONCLUSIONS:** The first experience of hypertension specialist service implementation in Belarus was positive. The service combining hypertension specialist care with hemodynamic, metabolic and psychosocial profiling approaches the problem of RH in a systematic fashion and rational basis. Hence, it can improve cost-effectiveness of the most expensive and difficult for management group of hypertensive patients. Our experience should spread to other Belarusian regions and CIS countries, where proportion of resistant hypertensives is high.

PCV63

OVER-ADHERENCE WITH ANTIHYPERTENSIVE MEDICATIONS AMONG CENTRAL TEXAS VETERANS

Yang M, Vincze G, Barner JC
The University of Texas at Austin, Austin, TX, USA

OBJECTIVES: Over-adherence can occur when patients repeatedly fill or refill their prescriptions before the exhaustion of their previous prescription supply. The study objectives were to: 1) assess antihypertensive medication over-adherence; and 2) identify characteristics associated with over-adherence. **METHODS:** Electronic medical records from Central Texas Veterans Health Care System were extracted for veterans aged 18 and older who received at least 2 antihypertensive prescriptions within one year between September 1995 and December 2003. The prescriptions were followed for 12 months. Logistic regression was employed to assess the relationship between antihypertensive class treatment episode and over-adherence (adherence > 100%), while controlling for demographics (age and gender), clinical variables (blood pressure control and relevant comorbidities), and treatment episode type (monotherapy or polypharmacy). A p-value of 0.01 was chosen. **RESULTS:** A total of 45,628 patients were included in the analysis and 78,120 treatment episodes were associated with them. Overall mean adherence rate (AR) was 1.07 ± 1.33 and 50.7% of these treatment episodes had AR > 1. Logistic regression (N = 61,125) showed increasing age (OR = 1.106, 95%CI: 1.090–1.123), polypharmacy (OR = 1.325, 95%CI: 1.279–1.374), uncontrolled hypertension (OR = 1.111, 95%CI: 1.069–1.154), type-2 diabetes (OR = 1.113, 95%CI: 1.069–1.159), and hyperlipidemia (OR = 1.182, 95%CI: 1.141–1.225) were significantly associated with over-adherence, while cardiovascular conditions (OR = 0.937, 95%CI: 0.901–0.974) were negatively associated with over-adherence. When these variables were controlled, compared with calcium channel blockers, use of angiotensin converting enzyme inhibitors (ACEI) increased (OR = 1.131, 95%CI: 1.078–1.186), while the use of angiotensin II receptor blockers (OR = 0.680, 95%CI: 0.590–0.783), beta-blockers (OR = 0.932, 95%CI: 0.885–0.981) and "pre-formulated" combination medications (OR = 0.767, 95%CI: 0.708–0.832) decreased the risk of over-adherence. **CONCLUSIONS:** Our study found that ACEI users were significantly at risk for over-adherence. It is important to further assess the clinical and financial consequences of over-adherence in health care programs such as the Department of Veterans Affairs, where prescription-supply is not limited.

PCV64

FACTORS ASSOCIATED WITH ADHERENCE TO ANTIHYPERTENSIVE MEDICATIONS AMONG VETERANS IN CENTRAL TEXAS

Vincze G, Yang M, Barner JC
The University of Texas at Austin, Austin, TX, USA

OBJECTIVES: Drug regimen complexity, medication type, patient characteristics, and comorbidities have been associated with antihypertensive medication adherence. This study evaluated the association of adherence with demographic (age and gender), clinical (blood pressure control and comorbidities), and medication (type and number prescribed) characteristics. **METHODS:** Electronic medical records from Central Texas Veterans Health Care System were extracted for veterans receiving at least 2 antihypertensive prescriptions within 1 year between 1995 and 2003. Adherence rate (AR) was calculated for each treatment episode. Multiple regression analysis was employed and a p-value of 0.01 was chosen. **RESULTS:** Study participants' (N = 34,719) mean AR was 0.95 ± 0.28, ranging from 0 to 1.5. Participants were predominantly males (95.3%), with an average age of 62.8 ± 12.6 years. More than two-thirds (68.3%) of patients' treatment episodes (N = 56,875) were part of multiple therapy. Uncontrolled blood pressure was prevalent (75.8%), and many patients had diabetes (20.5%), cardiovascular complications (22.3%), and hyperlipidemia (30.7%). Multiple regression analysis showed that older patients on multiple therapies had significantly higher AR's. Uncontrolled blood pressure, type-two diabetes, and hyperlipidemia were also associated with higher AR; whereas cardiovascular complications and type-one diabetes were associated with lower AR. Controlling for the above variables, adherence was significantly higher for angiotensin converting enzyme inhibitors (ACEI) and lower for angiotensin II receptor blocker, beta blocker, diuretic, other (including aldosterone receptor blockers, central alpha agonists, diazoxide, and peripheral vasodilators) and pre-formulated combination therapies. While the model demonstrated overall significance ($p < 0.0001$), it only explained 2.8% of the variance. **CONCLUSIONS:** The study showed that patient, clinical, and medication characteristics were associated with medication adherence. Patients who had more comorbidities and those on multiple therapies seemed to have higher adherence levels. Nevertheless, our results need to be interpreted with caution, due to the small proportion of variance explained by the model and the range of adherence observed.