

Are Cardiac Medications Underused in Older Patients?

Ganz DA, Lamas GA, Orav EJ, Goldman L, Gutierrez PR, Mangione CM. Age-related differences in management of heart disease: a study of cardiac medication use in an older cohort. *Pacemaker Selection in the Elderly (PASE) Investigators. J Am Geriatr Soc 1999;47:145-50.*

Study Overview

Objective. To determine whether older patients (> 75 years) were less likely than younger patients (65 to 74 years) to be prescribed medications with indications supported by evidence from efficacy trials, including angiotensin-converting enzyme (ACE) inhibitors for left ventricular dysfunction (LVD) and/or diabetes mellitus (DM), aspirin and/or β blockers for those with a history of myocardial infarction (MI), and warfarin for chronic atrial fibrillation (AF).

Design. Retrospective cohort study.

Setting and participants. 407 elderly patients randomized to ventricular or dual-chamber pacing between 26 February 1993 and 30 September 1994 in the 29 hospitals participating in the Pacemaker Selection in the Elderly (PASE) trial. The hospitals were predominantly tertiary-care institutions. 230 patients were aged 75 years and older and 177 patients were aged 65 to 74 years. The medical history of each patient was reviewed, and all patients received physical examinations at study enrollment, 3 follow-up visits (over a period of at least 11 months after discharge), and study closeout.

Main outcome measures. Rate of prescription of cardiac (ACE inhibitors, aspirin, β blockers, calcium antagonists, warfarin, digitalis, diuretics, nitrates, various classes of antiarrhythmic drugs, and other) and noncardiac (insulin, oral hypoglycemics, thyroid hormone, estrogen, nonsteroidal anti-inflammatory drugs, and other) medications.

Main results. Patients older than 75 years with any of the conditions studied were less likely to be prescribed indicated medications than patients aged 65 to 74 years with the same conditions (odds ratio [OR] = 0.35, 95% confidence interval [CI] = 0.18 to 0.70), after controlling for between-group differences in comorbidity, gender, and number of noncardiac medications. Specifically, patients older than 75 years were less likely to be prescribed ACE inhibitors for LVD and/or DM (OR = 0.56, CI = 0.31 to 1.0) or warfarin for AF (OR = 0.18, CI = 0.05 to 0.61). Also, patients older than 75 years with a history of MI were less likely to be taking aspirin (OR = 0.43, CI = 0.19 to 0.95).

Conclusion

Older age is significantly associated with suboptimal use of evidence-based medications, even in carefully monitored patients without apparent contraindications.

Commentary

The results of this study resemble those of population-based studies among the elderly that found suboptimal use of discharge prescriptions for ACE inhibitors, aspirin, and β blockers after MI [1-3]. However, the current study's finding is especially unsettling because it reflects the care of carefully monitored patients whose treatment regimens were initiated in tertiary care settings, rather than care of patients treated in community-based settings.

Applications for Clinical Practice

The authors have shown that although the results of randomized controlled trials may influence medical practice [4], evidence alone is insufficient to motivate broad implementation of evidence-based treatments. Further studies are needed to determine why evidence-based medications are being underutilized in the elderly and what steps can be taken to promote their optimal use in this rapidly growing population.

References

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