

SOCIETY OF GERIATRIC CARDIOLOGY-ASP-AMERICAN HEART ASSOCIATION CAREER DEVELOPMENT AWARD IN GERIATRIC CARDIOLOGY



Award Recipient:

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PROJECT:

HEART FAILURE AND MAJOR NONCARDIAC SURGERY

MENTORSHIP TEAM:

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The volume of surgeries in the United States has dramatically increased and so too has the medical complexity of patients undergoing major noncardiac surgery. Patients are older, and as survival from chronic diseases such as coronary disease improves, the prevalence of heart failure in the general population will increase as well. While great strides have been made for those with coronary disease undergoing major noncardiac surgery, little has been done for heart failure patients who need these surgeries. In 2002, there were over 40 million inpatient surgical procedures performed; over 10 million were major noncardiac surgery. Serious adverse events occur in more than one million patients per year. Over the next 20 years, it is estimated that the number of surgeries will increase by 25 percent, the associated cost will increase by 50 percent, and the cost of in-hospital and long-term complications will double.

The elderly compose the largest population of patients who undergo major noncardiac surgery. At least four million major noncardiac surgeries are performed in people 65 years old and older. Not only do the elderly represent the largest group of patients undergoing major noncardiac surgery, they are also the largest group with heart failure, accounting for over 75 percent of heart failure cases. Thus, the major change in age distribution in our population coupled with the epidemic of heart failure in the community will unfortunately have a major effect on outcomes after noncardiac surgery.

The broad objectives of this research focus on defining the critical perioperative risk factors for complications in surgical

heart failure patients and determining processes of care that predict future adverse events after such surgery. The first aim will focus on understanding patient and perioperative characteristics associated with cardiovascular events in heart failure patients undergoing major noncardiac surgery through a prospective cohort study of elderly heart failure patients undergoing major noncardiac surgery at Duke University Medical Center. The second aim will use Medicare data to examine practice patterns associated with outcomes in heart failure patients aged 65 and older undergoing major noncardiac surgery. Successful completion of both aims will significantly improve our understanding of the elderly with heart failure undergoing major noncardiac surgery and lead to improved care of this population.

With the support of the Society of Geriatric Cardiology, American Heart Association, and this career development award, my foundation in clinical research and geriatric cardiology will be greatly enhanced. Formal training in clinical research will be completed with a Masters in Health Science and further didactic training will be continued to increase my skills in clinical research. Other training activities include participation in geriatrics divisional conferences and presentations on a wide range of topics pertinent to geriatric cardiology. Under the mentorship of Harvey Jay Cohen, MD, Christopher M. O'Connor, MD, and Eric D. Peterson, MD, I will foster additional collaborations within the geriatrics and cardiology communities to increase my experience in conducting studies of the elderly.

