Potpourri of Special Groups; Treatment of the Elderly - Point/Counterpoint

Abstract
The World Health Organization (WHO) defines elderly as over 65 years of age in developed countries, whereas the United Nations’ criterion for “older person” begins at the chronological age of 60. Although these numbers are arbitrary, they are used in societies to measure the age at which retirement is permitted and pension benefits can be obtained.

As science and medicine has advanced exponentially over the past 25 years, life expectancy has increased dramatically since 1980. The Centers for Disease Control (CDC) has updated recommendations to screen all persons born between 1945-1965 for Hepatitis C Virus. This screening test is meant to detect chronic asymptomatic disease acquired through blood product transfusions or transplantation (received before July 1992) or via intravenous needle sharing.

A recent publication by van der Meer et al. in JAMA December 2012 shows a lower all-cause mortality for patients treated for chronic HCV and advanced hepatic fibrosis treated with interferon-based therapies. However, treatment in the elderly is not aggressively sought due to medication side effects, drug-drug interactions, and compliance concerns, although the AASLD guidelines for HCV treatment do not explicitly state cut-off age for treatment.

One major study (CUPIC) presented at EASL in 2012 showed concerning outcomes from triple therapy in the older population, and many hepatologists are now questioning the need to treat HCV aggressively with the current recommended regimen. In the CUPIC study, the population studied was comprised of previous non-responders with HCV GT1 and compensated child A cirrhosis. High rates of SAE’s were reported with a high discontinuation rate. Elderly (over 65) had an odds ratio of 3.04 predicting anemia <8.0 g/dL or necessitating blood transfusion. Among the complications, many required erythropoietin and blood products, with 4 deaths reported among the 310 enrolled.

Multiple studies in East Asia have been done with respect to treating the elderly with the Standard of Care therapy (SOC), and they have concluded that therapy with interferon and ribavirin are tolerated in properly screened and closely-followed older populations. However, there is a higher incidence of adverse events and poorer adherence, which is a contributor of treatment inferiority.

One major concern with the management of treating HCV in geriatrics is that the population is likely to have other major co-morbidities, such as cardiac disease, which may dissuade physicians from initiating therapy. Common side effects observed during treatment with interferon include aplastic anemia, neutropenia, and thrombocytopenia, all of which can theoretically potentiate cardiac events. However, multiple studies have shown no direct relationship between SOC and cardiac toxicity or worsening cardiac function parameters.
Patients may need extra clearance from specialists before or during treatment due to adverse effects. Additionally, many common medications for chronic illnesses may impede or compete with interferon or protease inhibitors due to competition in the P450 pathway.

Upcoming regimens that are planned for FDA release by July 2014 are projected to be safer for the elderly population with less side effects, drug-drug interaction, and shorter duration of treatment. One potential medication that is undergoing phase 3 trials is Sofosbuvir, a nucleotide inhibitor of HCV polymerase. Sofosbuvir, also known as Gilead-7977, is a pan-genotypic oral medication with SVR rates approaching 100% in some clinical trials of interferon-free combination therapy. In terms of insurance coverage, cost-effectiveness will be determined and weighed based on life expectancy in this aging population. In light of the progression and advancements in medicine, it may be worth waiting to treat HCV with promising, albeit expensive, non-interferon based therapies.

References