Deprescribing Blood Pressure Treatment in Long-Term Care Residents

A majority of long-term care residents take multiple medications for blood pressure control. There has been an increase in concern of polypharmacy in the geriatric population and that is something that has led to the deprescribing of potentially unnecessary medications. Prescribing multiple antihypertensive prescriptions might do more harm than good in older patients with polypharmacy and comorbid conditions, some observational studies have suggested. The problem is that prescribers aren't always sure what to do. While guidelines recommend using clinical judgment when prescribing the drugs to frail older patients, including the possibility of deprescribing, the guidance tends to be nonspecific on when and how to do that.

One retrospective cohort study of older adults living in U.S. Department of Veterans' Affairs (VA) long-term care facilities looked at the incidence of deprescribing of antihypertensive medication, as well as how potentially triggering events affected those decisions. It was conducted by Stanford University and VA Palo Alto Heathcare researchers who extracted data from the VA electronic health record, Centers for Medicare & Medicaid Services Minimum Data Set, and Bar Code Medication Administration. They included long-term care residents 65 years and older who were admitted between 2006 to 2019 and were using antihypertensive medication upon admission. Deprescribing was defined as a reduction in the number or dose of antihypertensive medications for 2 weeks or more. They examined potentially triggering events for deprescribing, including low blood pressure (<90/60 mmHg), acute renal impairment (creatinine increase of 50%), electrolyte imbalance (potassium below 3.5 mEq/L, sodium decrease by 5 mEq/L), and falls.

Among the 31,499 VA nursing home residents on antihypertensive medication, 70.4% had ≥1 deprescribing event, and 48.7% had a net reduction in antihypertensive medications over their stay. Deprescribing events were most common in the first 4 weeks after admission and the last 4 weeks of life. Among potentially triggering events, a 50% increase in serum creatinine was associated with the greatest increase in the likelihood of deprescribing over the subsequent 4 weeks: residents with this event had a 41.7% chance of being deprescribed compared with 11.5% in those who did not (risk difference = 30.3%, $P < .001$). A fall in the past 30 days was associated with the smallest magnitude increased risk of deprescribing (risk difference = 3.8%, $P < .001$) of the events considered.

In the nursing home setting, blood pressures are well controlled due to the increase in monitoring. There are also less adverse events due to these medications mostly due in part to this factor as well. Deprescribing is frequent during the nursing home stay, but only occurs between 10% and 30% of the time in the month after deprescribing-triggering events. Overall, LTCs have provide a safer environment for geriatric patients in regards to prevention of adverse drug events from hypertensive medications and the deprescribing rate is not extremely significant.

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