Treating Hypertension In Frailty

Intended for those with severe or very severe frailty according to the Clinical Frailty Scale

Developed by Dalhousie University Academic Detailing Service [http://cme.medicine.dal.ca/ADS.htm] and the Palliative and Therapeutic Harmonization (PATH) Program

The guideline is unique in that it focuses equally on when to stop and when to start antihypertensive medications.

Recommendations

Methods for measuring blood pressure

- Decisions about treatment should be based on blood pressure measurements in the seated (not supine) position, while also considering the presence of orthostasis.
  - To evaluate orthostasis, measure BP lying, then on standing. Ask the patient if they feel lightheaded or dizzy when standing.

Stop treatment

- If sitting SBP is <140mmHg, medications can be tapered and discontinued to achieve the targets described in the guideline. However,
  - Before discontinuation, consider whether the medications are treating additional conditions, such as rate control for atrial fibrillation or symptomatic heart failure.
  - It is not certain whether to discontinue treatment with a history of previous stroke (see rational below).

Start treatment

- Consider starting treatment when SBP is ≥160mmHg.
- Target SBP should be 140 to 160 mmHg while sitting as long as:
  - There is no orthostatic drop to <140 mmHg using the technique described above.
  - There are no adverse effects from treatment that affect quality of life.
  - See above recommendation regarding high-risk individuals with previous stroke.
- In the very frail with short life expectancy, a target SBP of 160 to 190 mmHg may be reasonable.
- The blood pressure target does not need to change when there is a history of diabetes.
- In general, use no more than 2 medications.

Rationale

- Evidence from "drug treatment" trials [i.e., trials that randomize patients to different treatments such as comparing placebo to a drug or comparing one drug to another drug] indicates that there is benefit in treating healthy older adults with hypertension. The benefit of treating frail older adults is unknown.[1]
- Major trials enrolled elderly patients only if their SBP was above 160 mmHg. As such, evidence supports initiating pharmacotherapy at a SBP ≥160 mmHg. None of the randomized controlled "drug treatment trials" involving elderly patients achieved a SBP <140 mmHg in the active treatment group. Therefore, there is no evidence from randomized controlled trials that supports a SBP target of <140 mmHg for the elderly.[1,2,3]
- 'Treat to target' trials randomize subjects to two different SBP target goals, but the two groups are treated with the same or similar drugs. Two "treat to target" trials of elderly subjects achieved a SBP <140 mmHg, but there were no statistically significant differences in the primary outcome. Thus, "treat to target" studies also fail to support a SBP target of <140 mmHg for the elderly. [1]
- The benefit of adding a third medication to lower blood pressure has not been studied. [1,2,3]
- The characteristics of frailty make the potential benefits of strict blood pressure targets even less certain and increase the possibility of harm from adverse drug events. The only study of adults above the age of 80, HYVET,[4] enrolled relatively healthy subjects and excluded individuals with a standing systolic BP of < 140 mmHg. Few patients had orthostasis, which can be a marker of frailty.

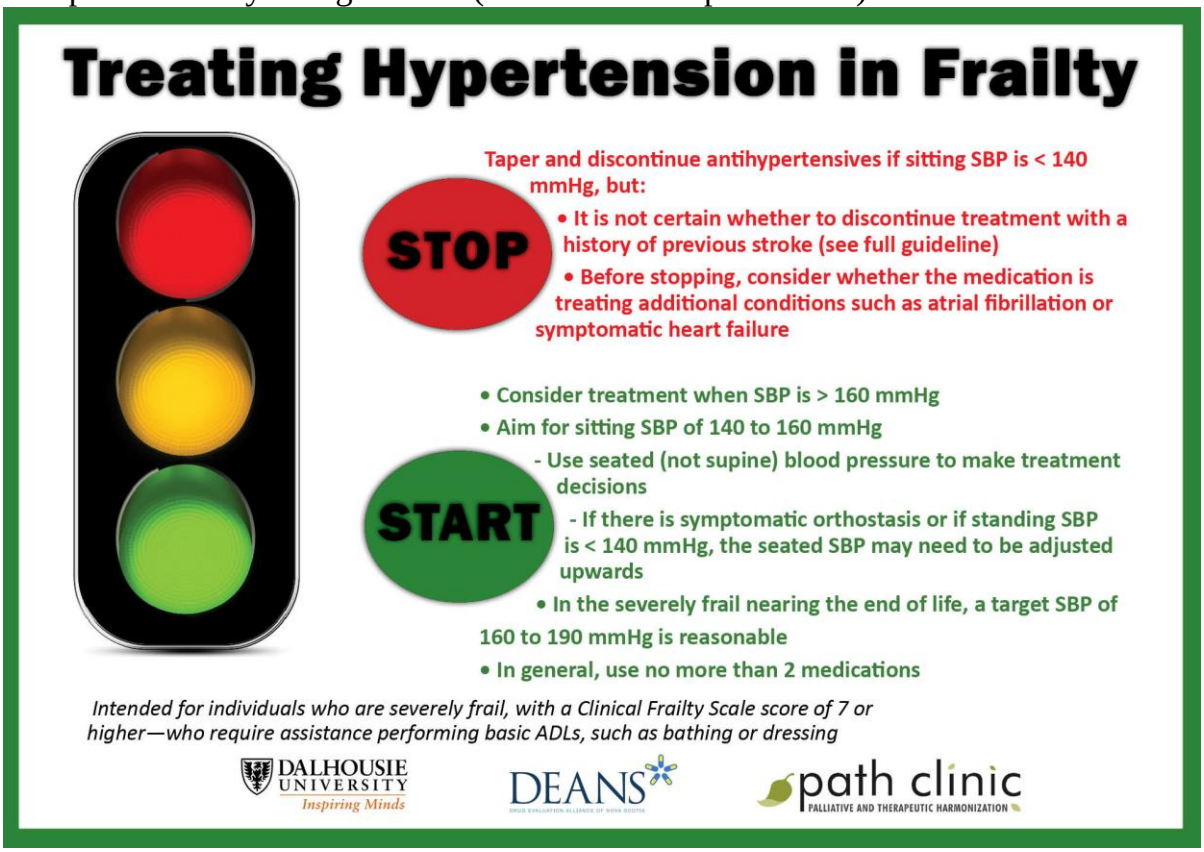
Rationale: High risk due to previous stroke

- Most of the studies reviewed above enrolled relatively healthy older adults. Due to limited evidence, it is even more difficult to judge the potential benefit of lowering BP below 140 mmHg when frail individuals have a history of previous stroke compared to the possibility that medications will cause adverse effects (such as weakness, orthostasis, and falls). To consider treatment benefit with frailty, we valued trial outcomes that would impact quality of life. Thus, a relevant outcome would be non-fatal stroke leading to disability. In contrast, the effect of treatment on preventing mortality is more difficult to assess due to competing causes for mortality with frailty.
- In PROGRESS,[5] individuals with a history of stroke or TIA (mean age of 64 years) were treated with perindopril +/- indapamide and experienced decreased rates of disabling stroke, with a relative risk reduction of 38% and absolute risk reduction of 1.64% (2.7% vs 4.3%; NNT 61, [95% CI 39-139] over almost 4 years, compared to placebo. Based on an evaluation of the risk reduction for all strokes (fatal and non-fatal), the relative risk reduction was found to be similar across a range of baseline systolic pressures, but the absolute reduction was greater in the population with a mean blood pressure of 159/94 mmHg compared to the remainder of the population with a mean blood pressure of 136/79 mmHg, suggesting that treatment is most beneficial for those with higher SBP. This evidence is based on studies of younger patients in relatively good health; the extent to which these results can be extrapolated to older, frail adults is uncertain due to the

timeline needed to achieve benefit and the added vulnerability of frailty, which could make treatment with two antihypertensive medications riskier.

- Another study of individuals with previous stroke and mean age of 66 years, PRoFESS,[6] showed no benefit over 2.5 years in the primary outcome of stroke using telmesartan (80 mg daily) compared to placebo. This result is concordant with the PROGRESS trial[57] in which those patients who took only one medication did not show a significant decrease in stroke. A possible reason for the lack of benefit from monotherapy is because reductions in BP compared to placebo were small in both studies (PRoFESS 3.8/2.0 mmHg, PROGRESS 5/3 mmHg). In contrast, patients on dual therapy in PROGRESS decreased their BP by 12/5 mmHg compared to placebo.

This poster conveys the guideline (to be used with permission)



References

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