RxFiles Q&A *Summary*

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Loren Regier BSP BA, Lynette Kosar BSP, MSc, Brent Jensen BSP, Julia Bareham BSP

Media Muddies the Water on Treatment of Hypertension (HTN)
Does MILD Hypertension need to be treated?

CBC news article: Blood pressure drug benefits overestimated for mild cases **Link: http://www.cbc.ca/news/health/story/2012/10/02/blood-pressure-mild-drugs.html**

A report on CBC news is likely to raise a lot of questions from patients & health professionals on the treatment of HTN. As is common for media health stories, the facts are told to help make the story. RxFiles thought it would be useful to provide a *heads up* on issues raised that were valid versus those that were potentially misrepresented. This is <u>not</u> an exhaustive critical appraisal but may be of value in the follow up discussions you are likely to have.

Potentially Valid	Potentially Misrepresented
☐ Need to confirm indication and reassure patients when treatment has a compelling indication (e.g. heart failure, atrial fibrillation, MI, etc.) with evidence for outcome benefit. ☐ It is reasonable to ask whether there is evidence for benefit of drug treatment when treating lower risk population with mild HTN. ☐ Notes that mild HTN may be over-treated in otherwise low risk individuals. ["Mild HTN" is defined as a SBP between 140-159 & a DBP of between 90-99. Current CHEP guideline BP threshold for initiating drug treatment is ≥160 SBP & ≥100 DBP in those with no risk factors but ≥140 SBP and 90 DBP if other risk factors present.][1] ☐ Focuses on important outcomes ("bigger question") such as MI, stroke and death more than surrogate outcomes such as blood pressure. ☐ Notes that drugs which have potential benefits may also have potential harms. The overall balance of benefits & harms must be part of an individualized treatment decision. ☐ Emphasizes essential & preferred role of "lifestyle measures" in the treatment of mild HTN. ☐ Cautions not to stop BP meds suddenly as this may be harmful (especially for beta blockers).	☐ The 2 studies in the news report were <u>not</u> at all similar in populations, treatments or trial methodology. o Cochrane Review of "Pharmacotherapy for mild HTN"[2] was a systematic review & meta-analysis that analysed the very limited RCT evidence for the treatment of mild HTN in primary prevention. This review included drugs from multiple antihypertensive classes, not just beta blockers. o REACH Registry was a relatively low quality observational trial looking at beta blockers in patients with coronary artery disease.[3] It did not study treatment of "HTN" per se. ☐ While BP targets for treatment of otherwise uncomplicated HTN are <140/90, the threshold at which to consider pharmacological treatment for low-risk patients is ≥160/100.[1] ☐ The findings in the Cochrane review included only 8,912 patients with *mild HTN* from 4 RCTs who met the inclusion & exclusion criteria. Since these patients were by definition, *low risk & only studied for 4-5 years*, the marginal/non-statistically significant results are not surprising. [Mortality @4-5yrs, Tx vs Pl: 1.3% vs 1.5%; ↓0.2%; RR=0.85 (95% CI 0.63-1.15)] ☐ "Absence of evidence" (e.g. p>0.05) is not the same as "not effective".	☐ The role of beta blockers post-MI has high quality evidence in RCT trials /meta-analysis over 2-4 years.[4] Data is lacking regarding how long a benefit may persist. The 4yr observational REACH data raises the possibility of less benefit over time which should not be alarming. [While the RCT data shows benefit, it reflects the pre-2000 era (pre-statin, revascularization, etc.)] o Observational trials are greatly limited by potential confounding. o The trend in this observational analysis of post-MI patients still favours beta blocker treatment. ☐ Besides the limitations of an observational trial, the study notes that use of atenolol was prominent in the subjects. Beta blockers are not generally 1st line for uncomplicated HTN[5] & relative to other beta blockers, there is evidence suggesting that atenolol may be less favorable.[6] ☐ Single BP measurement is insufficient for mild HTN. Guidelines suggest 4-5 successive readings with proper technique resting 5 minutes, arm @ heart level, etc. ☐ Pharmacist shown "counting pills" which is stereotypical, but somewhat unfortunate misrepresentation of what many pharmacists do by way of drug therapy decision making, drug monitoring & patient education.

BP=blood pressure (units: mmHg) CI=confidence interval CV=cardiovascular DBP=diastolic BP HTN=hypertension Pl=placebo RCT=randomized controlled trial RR=relative risk SBP=systolic BP Tx=treatment group

Take home points

- The limited evidence for antihypertensives in mild HTN is not new, and this is somewhat reflected in guidelines.
- Weigh the limited evidence, benefits, harms and patient values, and don't over treat mild HTN in low risk individuals.
  (Consider the *threshold for treating* and don't just rely on one BP reading. Do emphasize *lifestyle measures* in low risk.)
- Remember that treatment of moderate to high blood pressure does have evidence for overall benefit. Benefit is related to risk. In other words, patients with lower CV risk benefit less; those with higher risk, benefit more. As a result, greater caution & attention to the harms and side effects of medications is legitimate in deciding when & how to treat lower risk patients.
- Patients at higher risk of CV events should be reassured that lowering BP is associated with reduced risk of CV events.
- It's ok to reassess beta blocker use, but remember that in early post-MI especially 1st year and heart failure, they reduce mortality.
  (Do not stop beta blockers suddenly as this can cause serious withdrawal effects. To discontinue, taper over several weeks.)
- When treatment of uncomplicated HTN is indicated, preferred drug choices may include thiazide diuretics, ACEIs (or ARBs) or long-acting CCBs. Beta blockers are usually reserved for patients with compelling indications (heart failure, early post-MI, atrial fib.).
- Evidence is lacking to fully assess benefits/risks in low risk patients & to account for changes in post-MI practices e.g. revascularization.

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Comment. There is a lot more that could be discussed. We could discuss the specifics of the trial/review data. We could discuss the concept of disease risk assessment. We could discuss the concept of how decisions based on the benefits and risks of treatment are more often clear cut for patients at higher risk, and how for those at lower risk, there is a lot more uncertainty that enters into the equation. We could discuss the changes in management of patients following an MI that might lower their risk to the point that the patients absolute risk is reduced, and the corresponding benefit of beta-blocker therapy would be reduced. We could discuss the potential role for thinking about subgroups within the broader group lumped in as "low risk". But this discussion has focused instead on a few "quick takes" after watching the news, knowing that we will be answering related questions on somewhat confusing information. We are sure there will be opportunity to revisit specific aspects of the information in the days to come. Now, off to some academic detailing…

See also related RxFiles documents/charts from RxFiles Drug Comparison Charts, 9th Edition book:

CV Risk Tool: http://www.rxfiles.ca/rxfiles/uploads/documents/members/CHT-CVD-risk-table.pdf
Hypertension Summary and Guidelines: http://www.rxfiles.ca/rxfiles/uploads/documents/members/cht-HTN-1page%20summary.pdf
Hypertention trial summary: http://www.rxfiles.ca/rxfiles/uploads/documents/members/cht-HTN-trial-summary.pdf
Beta blocker comparison chart: http://www.rxfiles.ca/rxfiles/uploads/documents/members/CHT-HTN-bb.pdf
Post-MI comparison chart: http://www.rxfiles.ca/rxfiles/uploads/documents/members/cht-Post-MI.pdf
Heart Failure chart: http://www.rxfiles.ca/rxfiles/uploads/documents/members/cht-Heart-Failure.pdf
Evidence Based Medicine Overview: http://www.rxfiles.ca/rxfiles/uploads/documents/CHT-EBM-Overview.pdf

Other resources of interest:

Patient decision aid (sample) - Hypertension: http://www.npc.nhs.uk/therapeutics/cardio/cd_hyper/resources/pda_hypertension.pdf
Statins in the media (RxFiles): http://www.rxfiles.ca/rxfiles/uploads/documents/Lipid-statins-heart-risk-media.pdf

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- 160 pages, 20 new; 10 new charts; everything updated
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- Information available at www.RxFiles.ca
  - Orderform: http://www.rxfiles.ca/rxfiles/uploads/documents/1A-CHT-Book-ORDERFORM.pdf

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[6] Carlberg B, Samuelsson O, Lindholm LH. Atenolol in hypertension: is it a wise choice? Lancet. 2004 Nov 6;364(9446):1684-9.