Medical causes of back pain

(DECEMBER 2007)

TO THE EDITOR: In their otherwise excellent review, "Masquerade: Medical causes of back pain" (*Cleve Clin J Med* 2007; 74:905–913), Dr. Klineberg et al seem to confuse two distinct pathologic processes—aortic dissection and rupture of an aortic aneurysm. Parts of their description seem to fit the pathology of abdominal aortic aneurysm, with a pulsatile abdominal mass, sentinel bleeding, and rupture risk with a size over 6 cm, whereas other parts seem to correspond to aortic dissection, with severe, ripping pain and an association with Marfan syndrome. They also use the terminology "dissecting aortic aneurysm," which again implies a single entity, when in fact the two conditions rarely occur together. The authors are not alone in their use of this misnomer: a review of the Web sites of renowned universities reveals use of the same terminology. The readers would have been better served if the authors had discussed "acute aortic dissection" and "ruptured aortic aneurysm" as two separate causes of back pain, with a note that in rare cases an aortic aneurysm can develop a dissection.

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IN REPLY: We appreciate Dr. Hirsch's comments and are pleased to expand the discussion of this important point.

He is correct in his assertion that dissection and aneurysm are distinct processes. But the goal of this review was to remind practitioners to consider the aorta as a possible source of pain when it occurs acutely or in an atypical manner.

A number of aortic processes can cause back pain, and aneurysm and dissection are two of them, aneurysm being more common than aortic dissection. But the pain can also be from aortic ulceration, aortitis, contained rupture of an aneurysm, and other more esoteric problems.

Aortic dissection often presents as a tearing, severe, thoracic back pain. Pain from a progressive abdominal aneurysm is more commonly referred to the lower back or flank and can be severe and unrelenting. It is rarely described as a tearing pain like that of dissection.

It is difficult on initial physical examination to distinguish aneurysm from dissection. The key to diagnosing aneurysm is to detect the pulsatile abdominal mass. A pulsatile, tender abdominal mass with hypotension and back pain is classically associated with rupture of an abdominal aortic aneurysm. The combination of back pain, a deficit in peripheral pulses, and hypertension is more often associated with dissection.

Without imaging and appropriate consultation, it is difficult for even an experienced provider to definitively diagnose these disorders. Without a bit of suspicion, even with a careful physical examination either disorder might be overlooked entirely, with disastrous effect. The purpose of our review was to remind the reader that these conditions, while uncommon or even rare, do occur and should be sought out in patients presenting with acute, atypical lumbar and thoracic back pain. As with each of the conditions discussed in this review, the decision to linger a bit over the patient's history and then perform a basic, focused physical examination can be life-saving.

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What is adequate hypertension control?

(OCTOBER 2007, DECEMBER 2007)

TO THE EDITOR: I read with interest the exchange of letters between Drs. Norenberg and Graves in the December 2007 issue,[1,2] which followed Dr. Graves' article in the October 2007 issue.[3] Dr. Norenberg suggests that it is not always prudent to try to push systolic pressures below 140 mm Hg in the elderly, and Dr. Graves takes the position that physicians like Dr. Norenberg have been "too slow to adapt to evidence-based guidelines for quality of care." I would like to focus on Dr. Graves' reference to evidence-based guidelines for the treatment of systolic hypertension in the elderly.

Although there have been multiple published studies of the treatment of this disorder, none has achieved an average systolic blood pressure lower than 140. The Systolic Hypertension in the Elderly Program (SHEP)[4] came closest with a final systolic blood pressure of 144. No study has ever documented the efficacy and safety of achieving systolic blood pressures less than 140 in a cohort of elderly patients, and there is substantial evidence that excessive lowering of diastolic blood pressure can be harmful.[5,6]

Many elderly patients can achieve the target referenced by Dr. Graves, and it is reasonable to expect physicians to continue to strive for that goal, but it would be unwise to push all seniors below 140 systolic. Consider the elderly patient with systolic hypertension who is on a robust three-drug regimen including a diuretic, with a blood pressure of 144/60 and with persistent but tolerable drug side effects. I am aware of no clinical trials that demonstrate that further lowering of this patient's blood pressure would provide incremental benefit to outweigh the potential risks and costs of additional medications.

We need to be careful not to confuse evidence-based medicine with high-placed opinions, which can result in rigid approaches to treatment that are not in the best interest of our patients.

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IN REPLY: First, I am gratified by the tremendous interest in the care of the hypertensive patient that my article has generated. Dr. Norenberg and Dr. Kelleher are insightful clinicians, as evidenced by the issues that their letters raise. Secondly, as I am now 54 years old, SHEP's definition of "elderly" as 60 years old and older appears less accurate to me! However, I think we might all agree that to date there has not been a trial with people 65 years old and younger that has not shown benefit to treatment of the blood pressure to less than 140/90 mm Hg.

I believe that Dr. Kelleher's quest for more "evidence-based" data refers to treatment data in patients above that age. Hopefully, this quest will be answered by the results of the Hypertension in the Very Elderly Trial (HYVET).[7] In this trial, 3,845 patients older than 80 years were treated to less than 140/90 mm Hg. On July 12, 2007, the trial was stopped by the data safety and monitoring board, with the expectation of published results at the European Society of Hypertension and International Society of Hypertension joint meeting in Berlin in 2008.

Third, I must remind the reader that in practicing evidence-based medicine, we clinicians always must interpret the results of double-blind placebo-controlled trials, which tell us the *mean effect of a treatment*, but apply this information to the *individual patient* seated in front of us. A recent study[8] of individual blood pressure response to four forms of monotherapy showed that, in some patients, the blood pressure rose with hydrochlorothiazide instead of falling!

Fourth, Dr. Kelleher implies, correctly, that not all patients can reach the target of less than 140/90. In this regard I think the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT)[9] is very instructive. ALLHAT is the first trial ever to show improvement in the percent of people reaching goal blood pressure, rising from 52% to 63% during the 5-year study. ALLHAT shows us how good we can be and that we should not accept the failure to reach goal blood pressure in at least two-thirds of our patients.

The final and most important point is that the time for arguing the guideline recommendations[10–12] based on our own opinion is past. Third-party payers and patients are demanding we meet those guidelines until new information suggests that they need to be altered. HYVET may force such an alteration, but until then Dr. Norenberg, Dr. Kelleher, and I must attempt to reach the target of less than 140/90 in the majority of our patients.

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REFERENCES

1. **Norenberg DD.** What is adequate hypertension control? (Letter). Cleve Clin J Med 2007; 74:848.
2. **Graves JW.** What is adequate hypertension control (In Reply). Cleve Clin J Med 2007; 74:848–849.
3. **Graves JW.** What is adequate hypertension control? Having your dinner and dessert too. Cleve Clin J Med 2007; 74:748–754.
4. **SHEP Cooperative Research Group.** Prevention of stroke by antihypertensive drug treatment in older persons with isolated systolic hypertension. Final results of the Systolic Hypertension in the Elderly Program (SHEP). JAMA 1991; 265:3255–3264.
5. **Somes GW, Pahor M, Shorr RI, Cushman WC, Applegate WB.** The role of diastolic blood pressure when treating isolated systolic hypertension. Arch Intern Med 1991; 159:2004–2009.
6. **Fagard RH, Staessen JA, Thijs L, et al.** On-treatment diastolic blood pressure and prognosis in systolic hypertension. Arch Intern Med 2007; 167:1884–1891.
7. **Imperial College London.** Trial stops after stroke and mortality significantly reduced by blood pressure-lowering treatment for those aged 80 and over (Press Release). www.servier.com/pro/identification.asp. Accessed December 31, 2007.
8. **Hiltunen TP, Suonsyrja T, Hannila-Handelberg T, et al.** Predictors of antihypertensive drug responses: initial data from a placebo-controlled, randomized, cross-over study with four antihypertensive drugs (The GENRES Study). Am J Hypertens 2007; 20:311–318.
9. **ALLHAT Collaborative Research Group.** Major cardiovascular Events in hypertensive patients randomized to doxazosin vs chlorthalidone: the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT). JAMA 2000; 283:1967–1975. Correction in JAMA 2000; 288:2976.
10. **Khan NA, McAlister FA, Rabkin SW, et al; Canadian Hypertension Education Program.** The 2006 Canadian Hypertension Education Program recommendations for the management of hypertension: part II—therapy. Can J Cardiol 2006; 22:583–593.
11. **Chobanian AV, Bakris GL, Black HR, et al; National High Blood Pressure Education Program Coordinating Committee.** The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: the JNC 7 report. JAMA 2003; 289:2560–2572.
12. **Mancia G, De Backer G, Dominiczak A, et al; the Task Force For the Management of Arterial Hypertension of the European Society of Hypertension and the European Society of Cardiology.** 2007 guidelines for the management of arterial hypertension. J Hypertens 2007; 25:1105–1187.