BP disparity

1. What are the conditions under which a patient has disparity on BP readings of their right and lefts arms, but a normal carotid Doppler study?

Question submitted by Dr. T. W. Hum, North York, Ontario

The most common reason for differences in BP between arms is the variability of BP and its measurement.

In this setting, the BP difference between the arms is inconsistent. Theoretically, large differences in size of the arms or a painful lesion under the cuff in an arm could also produce the false perception of inter-arm BP differences.

It is only with focal stenosis of a subclavian or brachial artery—due to congental or acquired disease—that true and consistent BP differences exist.

Acquired diseases include:

- atherosclerosis,
- artery dissection,
- tumor compression,
- arterial emboli and
- arteritis.

The arm with the higher BP more accurately reflects systemic pressures.

Answered by:

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Pre-exercise assessment

2. When is it necessary to stress pre-exercise assessment?

Question submitted by Dr. I. Rohan, Montreal, Quebec

Assessment of individuals who want to begin an exercise training program depends on the health status of the individual and the intensity of the exercise training program. Indeed, apparently healthy individuals will need to ensure that they have no silent diseases and patients will need to ensure that they are clinically stable prior to exercise training.[1]

A detailed pre-exercise evaluation, including a medical history, physical examination and the usual laboratory tests, should be obtained before beginning exercise training.[2] This detailed evaluation is not necessary if the exercise program will be of light-to-moderate intensity, like brisk walking.[1] According to the American Heart Association, an exercise test should be routinely performed in people with known or suspected cardiovascular disease before beginning an exercise program.

Furthermore, exercise training is contraindicated in patients with:

- unstable angina,
- uncontrolled heart failure,
- severe aortic stenosis, or
- complex arrhythmia.[1]

As well, asymptomatic patients with diabetes should also be investigated using exercise testing before beginning vigorous exercise training.[3]

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Restarting anticoagulation therapy

3. When can warfarin be reintroduced after a stable GI bleed?

Question submitted by Dr. Corinne McKernan, Calgary, Alberta

There are no randomized controlled trials or specific guidelines describing when it would be safe to restart anticoagulation after a stable GI bleed. Consequently, the decision to restart therapy has to be based on clinical judgement, keeping in mind the risks and benefits.

The risk of GI bleeding episodes, in patients treated with warfarin, is influenced by factors such as:

- the degree of anticoagulation,
- age > 65 years,
- concurrent use of acetylsalicylic acid,
- presence of serious comorbid conditions (acute MI, renal insufficiency) and
- a history of GI bleeding.

Frequent and major GI bleeding during warfarin therapy occurs in up to 20% of patients.[1]

On the other hand, withholding warfarin for a prolonged period of time in patients requiring chronic anticoagulation therapy is also associated with some degree of risk. According to one study, withholding anticoagulation therapy for a median period of three days, due to acute GI bleeding in patients requiring long-term anticoagulation therapy, resulted in a 3.7% risk of symptomatic thromboembolism.[2]

The timing of restarting anticoagulation therapy is dependent on the anticipated healing time of the source of the GI bleed. For instance, there is an 80% healing rate associated with the use of proton pump inhibitors at six weeks post-GI bleeding, secondary to peptic ulcer disease.[3]

Restarting anticoagulation at six weeks is a reasonable option in patients presenting with GI bleeding. This can be modified based on the urgency of restarting anticoagulation (*e.g.*, restarting at two weeks for mechanical valve patients). According to a recent American Heart Association/American College of Cardiology statement, the target international normalized ratio (INR) can also be modified to minimize the risk of bleeding. In the case of a patient with a mechanical prosthetic heart valve and a persistent risk of bleeding, a target INR of 2.0 to 2.5 is reasonable. On the other hand, for patients with atrial fibrillation, anticoagulation intensity can be reduced to an INR of 1.5 to 2.0. This is of course with the caveat that efficacy will be diminished, but not abolished.[4]

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Other benefits of ARBs

4. What are other benefits of ARBs (e.g., treatment of microalbuminuria and increased intervals between episodes of paroximal AF, etc.)?

Question submitted by Dr. Sheldon Howard, Vancouver, British Columbia

Angiotensin receptor blockers (ARBs) have been associated with a decrease in the incidence of atrial fibrillation (AF). This was seen in clinical trials that compared the effects of ARBs to placebo in patients with heart failure and possibly in trials of ARBs for hypertension. Another trial discovered a decrease in the incidence of AF following treatment with ARBs and amiodarone, vs. amiodarone alone, in patients following cardioversion for AF.

Thus, ARBs are a potentially promising adjunct to other treatments designed to maintain sinus rhythm in patients with a history of, or who are at risk for, AF. However, until more data becomes available, this therapy is not sufficiently established to recommend ARBs for treatment of AF.

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ARBs are thus a potentially promising adjunct to other treatments designed to maintain sinus rhythm in patients with a history of, or who are at risk for, AF.