

Choosing the “best” ARB or ACE inhibitor

1. We are now inundated with ARBs, as well as ACE inhibitors. What evidence is there to support a “best” medicine or should we be considering class effective medications?

Question submitted by Dr. Layne Woodburn, Victoria, British Columbia

The principal *modus operandi* of all angiotensin-converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs) is the blockade of the renin-angiotensin system. All these drugs are efficient anti-hypertensives and useful in therapy of congestive heart failure and renal protection.

In the past five years, results of about 50 randomized trials were published, studying the specific additional merits of five ARBs and 11 ACE inhibitors presently on the Canadian market.

My first choice in treating the above conditions are ACE inhibitors and if not well tolerated, then I resort to ARBs.

As to whether any ACE inhibitor or ARB is better than the other, I find the problem in comparing the specific additional advantages of individual drugs in these classes to be that there is not a single proper randomized trial comparing ACE inhibitors or ARBs “head to head.”

My advice is to become intimately familiar with two or

three ACE inhibitors and ARBs and use those exercising your own clinical judgment. You will frequently find that patients who have problems with one drug respond well to another from the same class.

Answered by:

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Atypical chest pain

2. What is the approach to atypical chest pain?

Question submitted by Dr. Mike Johnston, Dalhousie, Nova Scotia

The approach to atypical chest pain depends, in large part, on the probability of the patient's likelihood of having underlying coronary disease.

Patients who are clearly low risk can be reassured and causes, other than coronary disease, can be investigated. Often all that is required is:

- a detailed history,
- a clinical exam and
- a baseline ECG.

Patients who should be considered for non-invasive investigation to rule out coronary

disease are those at intermediate-to-high risk, with factors such as:

- diabetes,
- smoking,
- hypertension,
- hyperlipidemia and
- post-menopause.

Non-coronary cardiac etiologies of chest pain should always be considered. These include:

- aortic dissection,
- pericarditis and
- myocarditis.

Answered by:

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ARBs and the increased incidents of cardiac events

3. Recent publication of research on ARB class of drugs and the increase of incidents of cardiac events is concerning. What is the general feeling about this issue among cardiologists?

Question submitted by Dr. B. L. Chandrarajan, Kingston, Ontario

The controversy which was raised in medical literature was whether angiotensin receptor blockers (ARBs) actually increased the risk of MI, as it was speculated that ARBs may increase angiotensin 2 levels, which could have detrimental vascular effects.¹ Regardless, ARBs are known to:

- decrease BP,
- improve symptoms of heart failure,
- decrease progression of diabetic kidney disease,
- reduce stroke rate,
- prevent new onset of diabetes mellitus and
- possibly prevent the onset of atrial fibrillation.^{1,2}

It appears that the arguments, both for and against ARBs were based on whether “my meta-analysis is better than your meta-analysis” of ARB and angiotensin-converting enzyme (ACE) inhibitor studies.^{1,2}

Included in the argument was the theory that ACE inhibitors may reduce MI and risk of death more than can be accounted for by simple BP reduction alone. ARBs do not seem to possess this quality. Nevertheless, ARBs are not dangerous *per se*.^{2,3}

Now, the general consensus among cardiologists is that:

- ACE inhibitors should precede the use of ARBs where vascular conditions are present, such as:
 - hypertension,
 - heart failure,
 - MI,
 - renal protection,
 - proteinuria,
 - associated diabetes mellitus, *etc.*
- ARBs do have hemodynamic benefits,
- ARBs do not necessarily cause a specific increase risk of MI, but they may not necessarily reduce the

risk of subsequent MI and

- ARBs can be used in patients who:
 - are unable to tolerate ACE inhibitors
 - have heart failure,
 - hypertension or
 - diabetic nephropathy, *etc.*

References

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3. Verdecchia P, Angeli F, Gattobigio R, et al: Do angiotensin II receptor blockers increase the risk of myocardial infarction? *Eur Heart J* 2005; 26(22):2381-6.

Answered by:

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Kawasaki disease

4. How do you follow an adult who has had Kawasaki disease as a child?

Question submitted by Dr. M. Manjos, Toronto, Ontario

This is an interesting question that requires a fairly complex answer. The answer really depends upon whether or not the patient has developed coronary artery changes with the disease. As you know, not every one with Kawasaki disease will develop coronary artery disease.

Those who most frequently do not develop coronary artery lesions are low-risk children, as defined by:

- temperature,
- white blood cell count,

- platelet count and
- response to immunoglobulin therapy.


However, high-risk children have coronary artery lesions in about 8% of females and in about 17% of males.

For those children who do not develop any coronary artery changes at any stage of the illness, no restrictions are recommended and cardiovascular risk assessment should be carried out at approximately five year intervals.

Those children who have developed small-to-medium sized coronary artery aneurysms should have an annual cardiology follow-up when they reach their adult years.

For the small per cent of those children who have developed a large aneurysm, or multiple complex aneurysms in the same coronary arteries without obstruction, cardiology follow-up should occur at least twice a year.

Cardiology follow-up should consist of:

- a proper medical history and physical examination for symptoms of coronary obstruction,
- an echocardiogram to detect the presence or the absence of significant coronary aneurysms,
- invasive or non-invasive investigations as dictated by:
 - their medical history and
 - physical examination, and/or
 - an exercise stress test. 

Answered by:

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