

CORRESPONDENCE

Different Treatment Options in Chronic Coronary Artery Disease

When is it the time for medical treatment, percutaneous coronary intervention or aortocoronary bypass surgery?

by Dr. med. Martin Ruß, Prof. Dr. med. Jochen Cremer, Prof. Dr. med. Arno Krian, Prof. Dr. med. Thomas Meinertz, Prof. Dr. med. Karl Werdan, Prof. Dr. med. Hans-Reinhard Zerkowski in volume 15/2009

Let's Go Down to Brass Tacks

The authors comment on percutaneous coronary intervention (PCI) in a slightly intricate manner—namely, that medical treatment in chronic coronary heart disease (CHD) is not inferior to PCI with regard to the end point “lethality”. What is needed here is some plain speaking. All large studies, from RITA-2 (1997) to COURAGE (2007), which compared PCI with conservative treatment in chronic stable CHD have shown that balloon angioplasty with or without stenting does not prevent myocardial infarctions or prolong life, whether one or multiple vessels are affected. In this indication, PCI is clearly a merely palliative measure to alleviate the symptoms of angina pectoris without improving the prognosis. A publication from the Mayo Clinic (1) states very clearly:

- Percutaneous transluminal coronary angioplasty (PTCA) is indicated for the improvement of symptoms
- PTCA does not prevent death or myocardial infarction
- Stents decrease rates of angiographic restenosis repeat procedures but not those of death or myocardial infarction.

With regard to aortocoronary bypass (ACB) surgery, the Mayo Clinic (1) says:

- ACB is effective in improving symptoms
- ACB does not reduce the incidence of nonfatal myocardial infarction
- The survival advantages of ACB are proportional to the patient’s original, pre-existing risk. It is recommended for different high-risk patients. This degree of clarity is lacking in the current article.

A courageous team of experts might have made the following recommendation in *Deutsches Ärzteblatt*: we propose that all general practitioners, cardiologists, and cardiovascular surgeons explain to their patients with chronic stable angina, before performing PCI or ACB, that these interventions do improve symptoms but do not prevent infarction nor prolong life, except in high risk patients. Therefore, treatment alternatives for the future would not be “stent or bypass,” but lifestyle modifications would become the decisive factor in improving the prognosis. Much more effective work could be done in this area without constantly waving the balloon catheter around.

If dilating or bypassing coronary stenoses in chronic ischemic heart disease have practically no influence on morbidity and mortality, the pathogenetic importance of high grade coronary stenoses is questionable. But this means touching on a taboo!

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REFERENCES

1. Rihal CS, et al.: Indications for coronary artery bypass surgery and percutaneous coronary intervention in chronic stable angina. Review of Evidence and Methodological Considerations. *Circulation* 2003; 108: 2439–45.
2. Ruß M, Cremer J, Krian A, Meinertz T, Werdan K, Zerkowski HR: Different treatment options in chronic coronary artery disease—when is it the time for medical treatment, percutaneous coronary intervention or aortocoronary bypass surgery? *Dtsch Arztebl Int* 2009; 106(15): 253–61.

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In Reply:

We clearly stated that lifestyle modifications, combined with medication, are the cornerstones of therapy for chronic coronary artery disease, and that their importance cannot be stressed enough.

The cited studies—RITA-2 (1) and COURAGE (2)—have unequivocally shown the success of medication. In both studies, however, initial medical treatment was compared with initial revascularization, without withholding revascularizing measures from the patients initially treated with medication as the studies progressed. The result was that 35.4% of patients in RITA-2 and 40.2% of patients in COURAGE who had initially received conservative treatment underwent revascularization (70% PCI and 30% ACB). Undoubtedly, these were the patients in whom medical treatment was insufficient in tackling their severe ischemia. Revascularization of such patients contributes to the positive result of medical treatment to a considerable extent as far as symptoms and prognosis are concerned. In contrast to what our correspondent says in his letter we remain convinced that “high grade” stenoses are of high pathogenetic importance; in the assessment, the morphology of coronary stenosis has taken second place after the functional relevance of coronary stenosis.

The “Nationale Versorgungsleitlinie Chronische KHK” (the national care guideline for chronic CHD” (3)) recommends catheter investigation/revascularization only in symptomatic patients who are receiving adequate treatment for their angina and who have confirmed ischemia.

Under these conditions, revascularization is a sensible and important additional therapeutic option that we would certainly not want to have to make do with-

out! Of course we do tell our patients in advance what the author of the letter would have preferred from a “courageous” team of authors: that for percutaneous coronary intervention in chronic CHD, randomized controlled trials have shown no survival advantage compared with conservative, medication based treatment.

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REFERENCES

1. Henderson RA, Pocock SJ, Clayton TC, et al.: Seven-year outcome in the RITA-2 trial: coronary angioplasty versus medical therapy. *Journal of the American College of Cardiology* 2003; 42: 1161–70.
2. Boden WE, O'Rourke RA, Teo KK, et al.: The evolving pattern of symptomatic coronary artery disease in the United States and Canada: baseline characteristics of the Clinical Outcomes Utilizing Revascularization and Aggressive Drug Evaluation (COURAGE) trial. *Am J Cardiol* 2007; 99: 208–12.
3. Nationale Versorgungsleitlinien chronische KHK, Langfassung. http://www.versorgungsleitlinien.de/themen/khk/pdf/nvl_khk_langpdf. 2008

1. Ruß M, Cremer J, Krian A, Meinertz T, Werdan K, Zerkowski HR: Different treatment options in chronic coronary artery disease—when is it the time for medical treatment, percutaneous coronary intervention or aortocoronary bypass surgery? *Dtsch Arztebl Int* 2009; 106(15): 253–61.

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Conflict of interest statement

The authors of both contributions declare that no conflict of interest exists according to the guidelines of the International Committee of Medical Journal Editors.