



SASCI
South African
Society of
Cardiovascular
Intervention

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SASCI Comment on Treatment of Myocardial Revascularisation from a South African Interventional perspective

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Background

South African Society of Cardiovascular Intervention (SASCI) represent the scientific, educational, socioeconomic, ethical and professional interest of cardiovascular interventionalists in South Africa, with a membership of over 90 cardiologists, we are the only national organisation exclusively representing practising interventional cardiologists.

SASCI is dedicated to maintaining the highest standards of practice for our specialists and the highest quality of care for those patients who require our care. As a result, we seek to serve as a reference resource of knowledge for members, patients and funders in matters related to our discipline.

The introduction of new technology is a constant in modern medicine. While authorities in the U.S.A. and European Union, such as the Food and Drug Administration (FDA) and Conformite Europeenne (CE) provide regulatory clearance on safety and effectiveness, practising medical practitioners may require scientific evidence on net health outcomes before offering new procedures to their patients.

SASCI as an official Special Interest Group of the South African Heart Association subscribe to the European Society of Cardiology (ESC) guidelines. The ESC guidelines are regularly updated to include the latest appropriate Evidence Based Medicine but local guidance (comment) is needed from time to time.

The following comments on the ESC Guideline have now been issued by SASCI. The ESC guidelines of 2010 were used as a basis for comments which have been numbered according to the ESC Guidelines for easy reference¹. These comments should be read in conjunction with the relevant ESC sections. The comments are not binding either to clinicians or to funders but should be used as a basis for appropriate decision making in individual patients.

SASCI is a Special Interest Group within SA Heart Association

Executive Committee

G Cassel (President), T Mabin (ex-officio President)

F Hellig (Vice-President), C Corbett (Treasurer), A Horak (Secretary)

Representatives

C Badenhorst, J Patel, J du Toit, M Ntsekhe (Academic), S Khan and C Zambakides



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There are many Sections of the ESC Guidelines where no comment has been made. This could indicate that we agree with the ESC Guidelines and would therefore be the Guidelines of SA Heart Association and SASCI.

The following are the sections upon which comments have been made:

Comment on ESC Section 6.3 – Optimal Medical Therapy

Optimal medical therapy (OMT) should be encouraged in the treatment of all cardiac patients as multiple risk factor intervention has been shown to be cost effective in reducing the complications and improving the long term outcome in cardiac patients. The funding environment needs to address funding barriers to Optimal Medical Therapy if this approach is to be pursued.

Comment on ESC Section 6.4 ESC – Indication for Drug Eluting Stents (DES)

Indications for DES

- Chronic Stable Angina
 - o <3mm vessel diameter
 - o >15mm vessel length
- Diabetics
- Left Main or Bifurcation or Proximal LAD
- Chronic Total Occlusions (CTO's)
- In-stent restenosis
- Ostial lesions
- Saphenous Graft lesions

Exclusion for DES

Diabetics with triple vessel disease including an LAD stenosis should be referred for surgery rather than the deployment of multiple drug eluting stents unless patients have been turned down for surgery due to co-morbidities.

Indications for Bare Metal Stents

- Lesions of 3.5mm or greater and shorter than 15mm (however, drug-eluting stents would not be inappropriate)
- Patients at high risk of bleeding (reduced duration needed for dual antiplatelet therapy)

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The use of bare metal stenting varies but in general should occur in approximately 20% of patients.

Comment on ESC Section 6.6 – Multivessel disease

It is felt that the following SYNTAX score should serve as a guideline for clinical practice but each patient must be judged individually as to which therapy is best for the patient.

The following SYNTAX scores service as a guideline

- <23 = PCI indicated
- 23 to 32 = Clinical judgment (PCI or Surgery)
- ≥33 = Surgery indicated (except when there is severe co-morbidity)

Comment on ESC Section 8 – ST-segment elevation myocardial infarction (STEMI)

Primary PCI is the treatment of choice in STEMI at centers with an active primary PCI program and if performed by an experienced operator. Any reference to “cases volumes required” in the ESC guidelines is not applicable in South Africa.

Comment on ESC Section 8.2 – Thrombectomy

Thrombectomy is recommended in AMI when there is a large thrombus burden present. Aspiration or mechanical thrombectomy may be appropriate in patients when large thrombus load is identified or total occlusion is present.

- Aspiration thrombectomy is indicated in STEMI
- If thrombus burden is large mechanical thrombectomy is indicated.

Comment on ESC Section 11.4 – Adjunctive Invasive Diagnostics

Pressure-derived FFR (Fractional Flow Reserve) guided intervention has been shown to be superior to angiographic guided intervention.

The use of FFR in intermediate coronary lesions (FAME²/DEFER³) translates to cost saving and improved clinical outcomes after two years. In addition has been shown to be cost beneficial through reduced need for stenting.

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Intravascular Ultrasound Imaging and Optical Coherence Tomography (IVUS) imaging is of clinical value in the following settings

- Left Main Intervention
- Assessing Left Main lesion significance and optimizing left main PCI
- In-stent restenosis
- Assessing complications of PCI and
- Transplant vasculopathy

The following comments do not have corresponding ECS guideline sections -

SASCI Comment on Radial Approach angiography

The use of radial approach angiography varies from center to center. There are some units where it is used in less than 5% and others where it is used as much as 75%. Doctors doing a large volume of radial cases have shown the procedure to be both cost effective in terms of hospital stay and safely in terms of reduced bleeding. In units where adequate training has been obtained, the use in both acute coronary syndrome and stable patients is encouraged.

SASCI Comment on imaging in low risk patients

Demonstration of significant myocardial ischemia is important in patients with chronic stable angina or low risk non ST segment Acute Coronary Syndrome. In that clinical situation SASCI would encourage the use of non-invasive stress imaging as a screening test before angiography. This could either include standalone stress electrocardiogram or stress testing together with radio nuclide imaging.

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References

1. European Society of Cardiology Guidelines on myocardial revascularization, European Heart Journal 2010; 31:2501–2555.
2. Tonino PA, de Bruyne B, Pijls NH, Siebert U, Ikeno F, Veer M, Klauss V, Manoharan G, Engstrom T, Oldroyd KG, Ver Lee PN, MacCarthy PA, Fearon WF. Fractional flow reserve versus angiography for guiding percutaneous coronary intervention. N Engl J Med 2009; 360:213–224.
3. Pijls NH, van Schaardenburgh P, Manoharan G, Boersma E, Bech JW, van't Veer M, Bar F, Hoorntje J, Koolen J, Wijns W, de Bruyne B. Percutaneous coronary intervention of functionally nonsignificant stenosis: 5-year follow-up of the DEFER Study. J Am Coll Cardiol 2007; 49:2105–2111.

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