

New and Updated ESC Guidelines Released

Written by Maria Vinal

The distribution of knowledge on prevention and treatment of cardiovascular diseases is a major responsibility of the European Society of Cardiology (ESC). In support of this mission, each year at its annual meeting, the ESC highlights new guidelines and/or those that have been updated over the past year. This year, Guideline Updates were introduced in three areas: Infective Endocarditis, Pulmonary Hypertension, and Syncope. New guidelines were issued for Perioperative Cardiac Management in Noncardiac Surgery.

Infective Endocarditis

Professor Gilbert Habib, MD, La Timone Hospital, Marseille, France, presented the revised guidelines for the Prevention, Diagnosis, and Treatment of Infective Endocarditis. Major changes include a focus on prevention (vs prophylaxis), an emphasis on the role of echocardiography in the diagnosis and management of infective endocarditis (IE), and a change to earlier surgery and more valve repair.

- Antibiotic prophylaxis is now recommended only for patients with the highest risk of IE who are undergoing the highest risk dental procedures. The importance of good oral hygiene and regular dental review are stressed as having an important role in reducing the risk of IE. To reduce the incidence of nosocomial disease, representing now up to 30% of cases of IE, aseptic measures are mandatory during venous catheter manipulation and during any invasive procedures. Prospective studies to evaluate the effect of these changes are recommended.
- Transthoracic echocardiography (TTE) is recommended as the first-line imaging modality in suspected IE. Transesophageal echocardiography (TEE) is recommended in patients with high clinical suspicion of IE and normal TTE, in patients with intracardiac material, and even in the majority of cases of positive TTE due its better sensitivity for the diagnosis of abscess. Repeat TTE/TEE is recommended after 7 to 10 days in the case of an initially negative examination when clinical suspicion of IE remains high or as soon as a new complication of IE is suspected. Finally, echocardiography is also recommended for the assessment of prognosis and embolic risk, during surgery, and for the follow-up of patients during antibiotic therapy.
- For the first time, these new ESC guidelines gave recommendations that concerned the timing of surgery in IE. Emergency surgery (within 24 hours) is recommended for patients with heart failure and aortic or mitral valve IE with severe regurgitation or valve obstruction or fistula into a cardiac chamber or pericardium associated with refractory pulmonary edema or cardiogenic shock. Urgent surgery (within the first week) is recommended for uncontrolled localized infection or uncontrolled infection with fever and positive blood cultures for >7 to 10 days. Urgent surgery is also recommended for the prevention of embolism in the case of aortic or mitral IE with vegetations >10 mm following one or more embolic episodes despite appropriate antibiotic therapy, or in patients with other predictors of complications.

Prof. Habib stressed the importance of a multidisciplinary approach to the treatment of patients with IE that includes cardiologists, cardiac surgeons, and specialists of infectious disease and the importance of highly specialized centers with surgical facilities.

Highlights from the



Pulmonary Hypertension

The 2009 guidelines for pulmonary hypertension (PH) were jointly developed by the ESC and the European Respiratory Society (ERS) with collaboration from the International Society of Heart and Lung Transplantation (ISHLT). They were presented by Professor Nazzareno Galiè, MD, Bologna University Hospital, Bologna, Italy.

Prof. Galiè began by emphasizing the difference between PH, which is not a disease but a pathophysiological and hemodynamic condition that is defined as an increase in mean pulmonary arterial pressure ≥ 25 mmHg at rest as assessed by right heart catheterization, and pulmonary arterial hypertension (PAH), which is a clinical condition that is characterized by the presence of precapillary PH in the absence of other causes of PH. He stressed the need to distinguish between the two when interpreting the new guidelines.

Overall, 127 graded recommendations have been provided in the new guidelines. Some of the major changes include the following:

- A new classification system for PH has been adopted that specifies six clinical PH groups with detailed descriptions for each group:
 1. PAH
 2. Pulmonary veno-occlusive disease and/or pulmonary capillary hemangiomatosis
 3. PH due to left heart disease
 4. PH due to lung diseases and/or hypoxemia
 5. Chronic thromboembolic PH
 6. PH with unclear and/or multifactorial mechanisms
- A unique early diagnostic algorithm is proposed
- A specific drug therapy and evidence-based treatment algorithm are provided for patients with PAH for both initial therapy and those with inadequate clinical response. Separate tables are provided, showing country-specific regulatory approval and labeling for PAH-specific drug therapy, the level of evidence for each therapy, and potentially significant drug interactions
- Definitions of patient status and treatment goals are provided, along with suggested assessments and timing for follow-up
- The indications for interventional procedures, including lung and heart-lung transplantation, are discussed

- The particular features of the different types of PAH patients, including pediatric patients, are highlighted
- The minimal requirements of referral/specialized centers for PH are discussed, underlining a need for professional clinical competence in the management of such demanding patients

Syncope

The updated Guidelines for the Diagnosis and Management of Syncope, developed in collaboration with the European Heart Rhythm Association, The Heart Failure Association, and the Heart Rhythm Society, were presented by Professor Angel Moya, MD, University Hospital, Vall d'Hebrón, Spain.

A major element in the new guidelines is an updated definition and classification of syncope, which places it within the larger framework of transient loss of consciousness. In the new guidelines, syncope is defined as “a transient loss of consciousness due to transient global cerebral hypoperfusion characterized by rapid onset, short duration and spontaneous complete recovery.”

Other major elements include:

- New data on orthostatic hypotension syndromes. The guidelines include a detailed table that outlines the clinical pictures that characterize the syndromes of orthostatic intolerance that can cause syncope. It includes a detailed explanation of the pathophysiological mechanism, the most frequent symptoms, and the clinical context in which they appear, as well as appropriate tests to aid in diagnosis
- New data on epidemiology that can aid in distinguishing reflex, orthostatic, and cardiovascular syncope are provided
- A new diagnostic approach that focuses on risk stratification is presented to assist clinicians in differentiating between the vast majority of patients with syncope who have a good prognosis and those whose syncope is associated with cardiac disease
- There is a new emphasis on the increasing role of a diagnostic strategy based on prolonged monitoring, not just on conventional laboratory testing.
 - Implantable loop recorders, for example, which have a battery life of up to 36 months and a memory that stores ECG

recordings, have already been shown to be cost-effective in the diagnosis of unexplained syncope and show a high correlation between symptoms and stored ECG data

- There is an update on evidence-based therapy
- Syncope in the elderly and pediatric populations is discussed
- Quality of life issues are addressed, including new guidelines for nonprofessional drivers with syncope that call for no restrictions following single or mild reflex syncope events or after recurrent and severe reflex syncope events once symptoms are controlled but with restrictions in cardiac syncope until successful treatment has been established (with modifications for those with an implanted pacemaker or cardioverter-defibrillator)

Reducing Cardiac Risk in Noncardiac Surgery

Don Poldermans, Erasmus Medical Center, MD, Rotterdam, The Netherlands, presented the new guidelines for Pre-Operative Cardiac Risk Assessment and Perioperative Cardiac Management in Non-Cardiac Surgery.

One of the major recommendations in the new guidelines is that continuation of chronic aspirin therapy should be considered during the perioperative period unless there is clear evidence that doing so would increase the risk of bleeding. Also, because lifestyle changes and medical therapy for cardiac risk factors have been shown to improve both perioperative and late outcome, the new guidelines recommend that when possible, these should be initiated prior to surgery. Secondary prevention for cardiovascular disease should be initiated prior to surgery, as it improves both postoperative and long-term outcome. The guidelines focus on noncardiac surgery and recommend a stepwise patient assessment, which integrates cardiac risk factors, exercise capacity, and the risk that is associated with the planned procedure to classify patients into risk groups. With this new assessment procedure, stress echocardiography, nuclear perfusion imaging, or exercise testing is recommended only for patients with ≥ 3 cardiac risk factors who are scheduled for high-risk surgery. Noninvasive testing should be considered not only for preoperative revascularization but also for patient counseling, change of perioperative management in relation to type of surgery, and anesthesia technique. The new guidelines also emphasize the restricted use of prophylactic coronary revascularization.

When used, beta-blockers should be started in a timely fashion prior to surgery and at a low dose, titrated to achieve a heart rate between 60 to 70 beats per minute. Statins with a long half-life or extended release formulations are recommended to bridge the period immediately after surgery when oral intake is not feasible. Preoperative coronary intervention using stents should be discussed with the treating surgeon and anesthesiologist, as antiplatelet therapy (aspirin and/or clopidogrel) influences perioperative management.

"The benefits of the new guidelines include an emphasis on medical therapy, reduction in preoperative cardiac testing, and prophylactic coronary artery revascularization," said Prof. Poldermans.

All of the ESC Guidelines are available at: <http://www.escardio.org/guidelines-surveys/esc-guidelines/Pages/GuidelinesList.aspx>.

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