



Figure 1. Procedure put forward for preoperative assessment. *The corresponding criteria are outlined in the text.

The Preoperative Electrocardiogram: Meaningless Routine or Essential Tool?

To the Editor,

The clinical assessment prior to any surgical intervention is generally carried out by an anaesthesiologist, however, in many cases the cardiologist is also required given that the cardiovascular risk has the greatest clinical and prognosis significance in the majority of interventions. The electrocardiogram (ECG) is a firmly established element of the preoperative cardiological assessment.

Official guidelines on clinical practice¹ take it for granted that the ECG forms part of the basic preoperative assessment, in addition to risk stratification using the normal scales.² They even state that an abnormal ECG determines the need for a cardiological consultation. It has been shown that the simple classification of preoperative ECGs into normal and abnormal improves the prognosis utility of the clinical assessment, based on the patient and intervention risk.³ However, 51% of preoperative ECGs are abnormal and this rarely has an impact on the therapeutic attitude or is correlated to results among the low risk population.⁴ In contrast however, information from

the preoperative ECG has significant prognostic relevance in patients with a history of ischaemic heart disease.⁵ The increased prognostic value of the operational risk provided by an abnormal ECG is very small among low or medium risk patients and it is therefore clear that systematic ECGs in this population may be unnecessary.³ For the purpose of the preoperative assessment, an ECG is considered abnormal when the following findings are present: left ventricular hypertrophy, pathological Q waves, or alterations in the ST segment, and some abnormal rhythms (atrial fibrillation/flutter, pacemaker rhythm, and ventricular extrasystoles).³ Basal sinus tachycardia (which can not logically be linked to the disease requiring surgical intervention) may also be added to the list, according to some studies which have shown its association with complications.⁵

As a result, with the exclusion of socioeconomic and labour issues, doubt has been placed on whether the systematic practice of preoperative ECG adds any prognosis utility to the full clinical history in patients undergoing non-cardiac surgical interventions (those with heart disease, by nature, require an exhaustive cardiological assessment, including, of course an ECG).⁶

The process outlined in Figure 1 has therefore been put forward for assessing patients undergoing non-cardiac interventions.^{1,6} Without entering in the debate regarding which

professional should perform the initial assessment of the patient before a non-cardiac surgical intervention, the aforementioned process indicates an ECG for patients undergoing emergency interventions, those who present a high risk due to combined pathology (heart failure, ischaemic heart disease, cerebrovascular disease, diabetes, chronic renal failure, and uncontrolled arterial hypertension) and for those requiring high or medium risk interventions. Low risk interventions are those performed under local or local and regional anaesthetic (endoscopy, dental procedures, breast surgery, endocrinology and gynaecological and plastic, and reconstructive surgery). Finally, a cardiological assessment is indicated if the ECG is abnormal: history and physical examination, echocardiogram, and ischaemia detection test if required (usually an exercise ECG or echocardiographic stress test).

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