Are you throwing away time and money with unnecessary routine preoperative test?

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Background

Preanaesthesia evaluation aims to assess the patient’s clinical status and identify pathologies that can be optimized to reduce perioperative morbidity and mortality. This evaluation is based on clinical history, physical examination and routine testing.¹

Preoperative tests are often ordered indiscriminately, without any clinical guidance. Several studies have demonstrated that they do not alter the outcome of asymptomatic patients undergoing elective surgery, and may even increase morbidity due to false positive results and unnecessary treatments. Furthermore, human and financial resources are also wasted.^{2,3}

Objective of Study

The objective of this study is to evaluate the financial costs that could have been saved if preoperative tests were performed according to the NICE Guidelines - *Routine* preoperative tests for elective surgery, from April 2016.

Material and Methods

Retrospective study that evaluated routine preoperative testing, including full blood counts, hemostasis tests (aPTT, PT), kidney function (electrolytes, creatinine, urea levels), electrocardiography (ECG) and chest X-ray, performed in patients who had anesthesiology consultation at Hospital Santa Maria - Centro Hospitalar Lisboa Norte, during November 2016. NICE Guidelines - Routine preoperative tests for elective surgery were used to determine the necessary tests and those that would be dispensable.

Preoperative Test	Price (Euros)
Full Blood Count	4,7
Hemostasis Tests	5,9
Kidney Function	4,0
ECG	6,5
Chest X-Ray	9,0

Results and Discussion

The study sample included 165 patients, mean age 59,9 years, 37,6% were male and 62,4% female, 18,2% ASA I, 61,2% ASA II and 20,6% ASA III. All patients had full blood counts, hemostasis tests, kidney function, ECG and 163 performed chest X-ray. However, only 16,3% of full blood counts, 4,8% of haemostasis tests, 32,1% of kidney function and 35,2% of ECG were needed. All chest X-ray were considered irrelevant. Thus, according to all these test cost there was an excessive expenditure of 4185,40 euros, at Hospital Santa Maria.

Table 1: Necessary and dispensable preoperative tests performed according to the NICE Guidelines

Conclusion

Unnecessary preoperative tests waste expensive staff time, as well as equipment and material. In addition, surgery may be delayed due to false positives and patients are wasting time, possibly away from work. If NICE Guidelines - Routine preoperative tests for elective surgery were applied, an excessive expenditure of 4185,40 euros could have been avoided in the preoperative evaluation.

Self-administered questionnaires and targeted preoperative examinations may be alternatives to routine preoperative tests.

References

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