CORRESPONDENCE

Preoperative Risk Assessment—From Routine Tests to Individualized Investigation

by Dr. med. Andreas B. Böhmer, Prof. Dr. med. Frank Wappler, Prof. Dr. med. Bernd Zwißler in issue 25/2014

Questionable Statement

The authors state that the sensitivity of chest X-rays is so low that they should only be obtained when a pertinent diagnosis is clinically suspected. To support this statement reference is made to two publications.

In the 40-year-old publication it is stated that a chest x-ray is essentially not indicated in asymptomatic patients under 20 years of age; a PA x-ray is indicated in patients aged 20 to 39 years; a PA and lateral chest x-ray is required in patients older than 40 years (1). The second publication investigates to what extent a preoperative chest x-ray triggers further actions and whether postoperative complications occur more frequently when no preoperative radiograph was obtained (2). The authors arrive at the conclusion that it is not necessary to obtain a chest x-ray in patients under age 70 with no risk factors; no recommendation is made for older patients. Thus, both citations cannot be used to suggest that chest x-rays are not necessary. From the perspective of anesthesiology and with a focus on perioperative complications, it may be justified to question the benefit of chest radiographs. However, it is a questionable approach to only obtain an x-ray in relation to the planned intervention and not based on a holistic understanding of the patient. In addition, it is negligent to state that the sensitivity of x-rays to diagnose cardiopulmonary disease is low. A screening study on the early detection of lung cancer showed that in asymptomatic smokers with a history of at least 30 pack years, chest radiography detected lung cancer in 3.5% of cases (3). The incidental finding in a chest x-ray is the only chance to detect lung cancer in an early, operable stage.

Taken together, these data suggest that preoperative chest x-rays in suitable quality should be requested, at least in smokers.

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Prof. Dr. med. Hendrik Dienemann, Thoraxchirurgie

Hendrik.Dienemann@med.uni-heidelberg.de
Prof. Dr. med. Claus Peter Heußel, Diagnostische und Interventionelle Radiologie mit Nuklearmedizin
Prof. Dr. med. Michael Thomas, Onkologie der Thoraxtumoren
Prof. Dr. med. Felix Herth, Pneumologie und Beatmungsmedizin
PD Dr. med. Werner Schmidt, Anästhesiologie und Intensivmedizin
Thoraxklinik, Universität Heidelberg

Conflict of interest statement

Prof. Heußel owns shares of Stada and GSK. He holds the patent „Method and Device For Representing the Microstructure of the Lungs, „IPC8 Class: AA61B5055FI, PAN:

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Prof. Dienemann, Prof. Thomas, Prof. Herth, and PD Dr. Schmidt declare that no conflict of interest exists..

In Reply:

A principal foundation of our article is the rule that the indication for further diagnostic testing is based on the patient's history and a physical examination. The routine screening of asymptomatic patients, which was common practice in the past, has been consistently abandoned, because many results are of no relevance for anesthesia and the surgery, and the rate of false-positive results, triggering unnecessary tests, is very high. This was shown in a systematic review which found no evidence to support the practice to routinely obtain preoperative chest x-rays or lung function tests (1). It is crucial that patients undergo targeted and adequate diagnostic investigation. For example, a chest x-ray may be indicated in patients with severe chronic obstructive pulmonary disease, with previously unknown pulmonary or cardiac symptoms, and with gastrointestinal malignancies (2). In contrast, experts do not consider the smoking status as an indication (3). From this, it becomes clear that routine screening does not improve patient safety in the perioperative process. Should there be further indications for obtaining a preoperative chest x-ray, these must be supported by studies. Then, it is necessary to differentiate between a global screening method and a preoperative risk evaluation. If one sees the chest radiograph as a suitable diagnostic modality for the early detection of lung cancer in smokers, the screening examination should be carried out independent of a planned surgery. Waiting for an operation could mean that precious time is lost and it may be too late for a surgical intervention. Preoperative risk evaluation can and should not fill this “gap”.

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Prof. Dr. med. Frank Wappler

Klinikum der Universität Witten/Herdecke – Köln
Klinik für Anästhesiologie und operative Intensivmedizin; Krankenhaus Köln-Merheim, Köln
wapplerf@kliniken-koeln.de

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The author declares that no conflict of interest exists.