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Research Article

Evaluation of Preoperative Tests in Elective Surgeries of Asymptomatic Patients During Covid-19 Pandemic

Ali Bestemi Kepekçi[1]

[1]Department of Anesthesia, Vocational School of Health Care Services, Istanbul Yeni Yuzyil University, Istanbul, Turkey

Abstract: With the Covid-19 pandemic, some changes have been made in health practices. In this study, the action plan applied in the preoperative evaluation of patients with no symptoms and contact history planned during the pandemic was presented in light of the Ministry of Health communique and the literature. Preoperative Evaluation Action Plans were determined in each hospital. The first aim is to distinguish patients who are asymptomatic and have no contact history. Then, these patients are evaluated before the operation with the tests and physical examination. Various changes were made in the tests used in preoperative evaluation during the pandemic process. Initially, the first preferred test was thorax computed tomography, while the polymerase chain reaction test is now recommended. Accurate information and compliance with determined action plans are of great importance in the planning of elective surgeries. It is evident that preoperative evaluation criteria may change according to the characteristics of the pandemic process.

Keywords: *Consent forms; Covid-19, elective surgical procedures, pandemic; PCR; thorax computed tomography*

Address of Correspondence: Ali Bestami Kepekçi- alibestami@gmail.com 0000-0002-5215-9545, Department of Anesthesia, Vocational School of Health Care Services, Istanbul Yeni Yuzyil University, Topkapi Azmi Ofluoglu Yerleşkesi, Maltepe Neighborhood, Yılanlı Ayazma Street, No: 26, 34010 Cevizlibağ, Zeytinburnu, Istanbul, Turkey

1. Introduction

After the new coronavirus was accepted as a pandemic, the Ministry of Health had suggested postponing elective surgery and endoscopic procedures with its notification. With the resumption of elective surgeries, the application of surgery to asymptomatic patients poses the risk of both the spread of the disease and healthcare professionals. It is reported that Covid-19 may cause hospital infections that seriously threaten

surgical staff and hospitalized patients (Liang, 2020). In this study, the action plan applied in the pre-operative evaluation of asymptomatic and non-contact patients is presented in light of the Ministry of Health communique and literature.

2. Materials and Methods

In order to identify symptomatic patients and people with contact/suspect contact, all patients are triaged in the emergency room upon arrival at the hospital. The presence of contact history, fever, cough, and respiratory distress are questioned with someone diagnosed with Covid-19 in the past 14 days. Routine examinations are requested during anesthesia pre-operative examinations. Then the second triage is done by the anesthesia team. The anesthesiologist evaluates the tests through the automation system. Patients with the presence of signs are referred to the infectious diseases outpatient clinic as possible cases and their operations are delayed. With the previously determined road plan of these patients, they are allowed to go to the infection outpatient clinic without approaching other patients. Those who do not find a feature in their examination (no suspect contact-no complaint) are evaluated face to face in the anesthesia outpatient clinic. In this evaluation, Anesthesia Policlinic Isolation Rules (anesthesiologist must wear surgical mask-visor-gloves) are followed. "Written consent" is obtained from the patients that they have answered the questions correctly. A detailed physical examination is done. After the approval of anesthesia, from the patient, carrying, peri-operative or post-operative symptomatic, hospital-related transmission risks are stated and "Covid-19 Special Informed Consent Form" is signed, which states that "surgery is not urgent and can be delayed".

3. Results

In this study, the changes made in parallel with the explanations of the Ministry of Health and the practical applications in our institution before any algorithms have been published are examined. Diagnostic tests are very important especially in asymptomatic people during the pandemic. Molecular tests with genetic material and serological tests with antigens or antibodies against the virus are used in laboratories (Gürbüz, 2020).

Current molecular tests are techniques that detect the genetic material of the virus using a method based on real-time reverse transcription polymerase chain reaction (RT-RT-PCR) (Li et al., 2020). RT-PCR tests in Turkey Ministry of Health Directorate General of Public Health Microbiology Reference Laboratory is done at authorized centers by.

4. Discussion

Due to technical reasons, such as virus mutation or RT-PCR inhibition, or due to insufficient viral material in the sample, the negativity of the RT-PCR test is not sufficient to rule out the disease (Gürbüz, 2020). The total positive rate of RT-PCR in the diagnosis of Covid-19 was reported to be approximately 30% to 60% in the first presentation (Yang et al., 2020). Development of antibody tests to ensure rapid screening of symptomatic or asymptomatic carriers in laboratories should be targeted (Calucho, 2020).

At the beginning of May, when elective surgeries started, there was no opportunity for RT-PCR tests for people without symptoms at the centers authorized by the Ministry of Health. When this is the case, the respiratory system that the virus most affected affects lung imaging methods. In a study, the sensitivity of RT-PCR test in the early period of the disease was reported as 71%, and thorax computed tomography (CT) as 98% (Xie et al., 2020). The sensitivity of chest x-ray is reported between 30-60% in showing disease involvement (Kong and Agarwal, 2020).

The most common findings are the radiographic view of ground glass on chest x-ray in the diagnosis of Covid-19 or bilateral frosted glass in CT and accompanying consolidation (Özdemir et al., 2020). Though RT-PCR test is the gold standard in the diagnosis of Covid-19, it has been reported that thorax CT is becoming more and more important in the diagnosis because it can give false-negative results (Ai et al., 2020; Xie et al., 2020). According to the data of this literature, we determined the Preoperative Evaluation Action Plan in elective cases, and performed thoracic CT imaging in asymptomatic individuals. In some of the papers, it was stated that because CT contains ionizing radiation, it should be used as a problem-solving method in patients who have negative RT-PCR but are clinically interrupted rather than a scanning method (Erturk, 2020). Turkish Anesthesiology and Reanimation Association (TARD) published a guideline titled "Recommendations to Start Elective Surgeries" on May 21, 2020 (Ergil et al., 2020). Stating that social awareness and individual patient education are important, TARD recommended that the RT-PCR test be extended (Ergil et al., 2020). Then, on June 1, 2020, the Ministry of Health stated in her communique that she published the method proposals to be followed regarding elective surgeries (Ministry of Health, 2020). In this guide, it was suggested that thorax CT should not be requested for screening patients. It was stated that RT-PCR test was recommended in asymptomatic and hospitalized patients who are not in contact with the known or suspected Covid-19 patient and in regions of prevalence and/or test positivity rates (≥2%). In the same study, "surgeries should be done within the first 7 days after the negative test result." the statement said. After the 1st of June, 2020, people without symptoms were given the opportunity to apply RT-PCR test via HSYS. After this date, as an institution, we started to use RT-PCR test in asymptomatic patients who will have surgery instead of thorax CT.

Conclusion

In the planning of elective surgeries in the Covid-19 pandemic, harmony, cooperation, and accurate information is of great importance among patients, patient relatives, anesthesiologists and surgical team. It is obvious that pre-operative evaluation criteria may change according to the characteristics of the pandemic process. Consistent policies are needed to protect both patients and health professionals as long as the pandemic continues. Besides the legislative will, professional organizations, civil society organizations should also take an active role in determining these policies.

Conflict of Interest

Author declares no conflict of interest.

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