COMENTÁRIO EDITORIAL

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COVID-19: Crisis Management in Lung Cancer Surgery

The COVID-19 pandemic has forced hospitals to progressively reduce surgical volumes to both minimize disease transmission within the hospital, and to preserve human and Personal Protective Equipment and other resources needed to care for COVID-19 patients. In response, many hospitals have abruptly reduced or eliminated elective surgeries. For lung cancer, failure to perform an indicated surgery in timely fashion may have long term implications on a patient's survivorship. However, thoracic oncology decisions are further complicated by the fact most of the patients would be considered to be a "high risk" group for poor outcomes with COVID-19 (advanced age, emphysema and heart disease). Further, the indicated therapeutic procedures can both impair lung function, and expose clinical teams to aerosolized viral load (bronchoscopy, double-lumen endotracheal tube placement, airway surgery and possibly parenchymal lung leaks).[1-4]

Transparency regarding the potential risks of deferring or proceeding with an operation remains a priority. Surgeons should discuss these decisions individually with their patients. Multidisciplinary teams are encouraged to develop alternative treatment strategies if surgical resection is declined or infeasible. Because the duration of surgical volume restriction is unknown (3 months is presumed), patients who are delayed or deferred should be carefully followed.

Although not intended for the study of patients undergoing lung cancer surgery, the first prospective study[5] published in the context of the treatment of cancer patients in a COVID-19 time allows us to draw some conclusions. The study by *Liang et al* monitored 1590 cases of patients hospitalized with COVID-19, of which 18 had a history of cancer (1%). Of these, 5 (28%) had a diagnosis of lung cancer, 12 (67%) were in follow-up after primary resection and 4 (25%) were in a period of convalescence after chemotherapy or surgery performed in the last month. Thus, this study compared, in infected patients, the impairment of a history of cancer, regardless of their type of treatment (chemotherapy / surgery), stage of the disease and histology.

As empirically expected, it showed that cancer patients presented more polypnea and more severe baseline CT manifestations than patients without a history of cancer. Furthermore, it was observed that cancer patients had a higher risk of severe events in intensive care, namely the need for invasive ventilation or death. As well as a faster deterioration (median time for severe events 13 vs 43 days). Finally, patients who had undergone chemotherapy or surgery in the previous month also had a higher risk of severe clinical events than those who were at follow-up.

In line with the conclusions of the study by *Liang et al*, the Cardio-Thoracic Surgery Department of the Centro Hospitalar de Vila Nova de Gaia / Espinho proposes four main strategies in the treatment of lung cancer in the context of this pandemic:

- First, postponement of elective surgeries should be considered, except in patients where survival may be compromised if the surgery is not performed within 3 months, according to the guidelines of the *American College of Surgeons*.[6]
- Second, screening tests for COVID-19 should be carried out prior to surgery on all patients and not continuing with hospitalization in confirmed cases.
- Third, provide adequate personal protective equipment for surgeons and patients and apply more stringent protective measures in the first month after surgery.
- Fourth, in case of SARS-CoV-2 infection contracted after surgery, active surveillance or more intensive treatment should be considered, especially in elderly patients or those with other comorbidities.

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