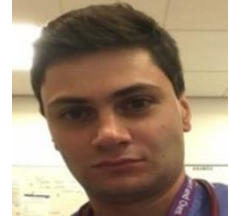


Parenchymal haemorrhage post CT guided percutaneous lung biopsy. A frequent but insignificant complication?

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Abstract

Purpose: To review Computed Tomography (CT) guided lung biopsies performed in two tertiary hospitals in Merseyside, in the United Kingdom (UK). To determine the rate of potential complications of CT guided lung biopsies.

Methods and Materials:We present a retrospective review of CT guided biopsies performed from October 2018 to December 2019. Clinical reports in the Radiology Information System were reviewed and procedural details were collected. The CT scans regarding the biopsy procedure and the chest X-ray routinely performed 2 hours after the biopsy procedure were reviewed by two experienced chest radiologists and evidence of immediate complications was collected. Electronic patient information system (EPR) was examined for delayed complications. Histology reports were checked for diagnostic adequacy. A total of 125 cases of CT guided percutaneous lung biopsy were identified. The needle size used was 20G in 76%, 19G in 3.2% and 18G in 11.2% of cases. The needle size was not documented in the patient notes in 9.6% of cases. The diagnostic accuracy was deemed adequate in 89.6% and inadequate in 10.4% of cases.

Histological reports document lung cancer in 83 / 125 (66.4%), normal / fibrotic changes of the lung in 18.4% and others in 15.2%. Complication rates were documented for pneumothorax (29.6%), mostly self-limiting and none requiring the insertion of a chest drain. Parenchymal haemorrhage occurred in 48.8% which was self-limited in all cases. Haemoptysis and self-limited nosebleed occurred in 1 case each (0.8%). Pleural effusion was documented in another case (0.8%), not requiring the insertion of a chest drain. Stroke occurred in one case (0.8%), 3 hours after the biopsy procedure.

Biography:

The results broadly follow published studies, namely the UK and the BTS studies, with complication rates regarding pneumothorax and haemoptysis within acceptable results. The complication rate of parenchymal haemorrhage was significantly higher, although all were self-limited, and none led to any significant clinical complication. We propose that parenchymal haemorrhage is under-reported in the published literature and mostly clinically not significant. We will also assess the biopsy technique used, correlate it with the risk of complications and suggest technique modifications to reduce the incidence of these complications.

Speaker Publications:

1. "Carcinoid tumor of the anterior mediastinum in a 38-year-old woman".

[2nd Global Meeting on Oncology and Radiology;](#) Webinar- December 10, 2020

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