Pathobiology DOI: 10.1159/000509958 Received: June 30, 2020 Accepted: July 7, 2020 Published online: July 21, 2020

The Two Sides of Cytopathology during the COVID-19 Health Emergency: Screening versus Diagnosis

Pasquale Pisapia Giancarlo Troncone

Department of Public Health, University of Naples Federico II, Naples, Italy

The current pandemic caused by severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2) has highlighted the fact that cytology plays not only a screening but also a full diagnostic role [1-3]. Undoubtedly, the aggressive containment measures implemented at the beginning of the outbreak by nearly all European governments were meant to prevent the fast spread of the virus and to flatten the curve of infection, which indeed they did. On the other hand, they led to a drastic reduction, if not interruption, in the volume of health care procedures, in particular cancer screening programs, as de Pelsemaeker et al. [4] consistently detail in this journal. These authors adopted the global histopathological and cytological workload as the main health care system activity indicator. Their findings indicate that the histological activities reflect not only different types of biopsies (mainly endoscopic, cervical, skin, bone marrow, breast, and prostate) but also different types of surgical specimens (specifically breast, thyroid, and lower digestive tract). Although their data shows a significant reduction in the total histological workload during the emergency, more complex and critical cases continue to be received and processed. Consistently, in a recent study [5], we reported that during the emergency, the percentage of malignant cytology samples increased, as evidenced by higher percentages of breast and lymph node fine needle aspiration specimens, effusions, and urine samples.

The role of cytopathology is however de-emphasized by de Pelsemaeker et al. [4]. A possible explanation is that their cytological workload analyzes only cervical smears, which are reduced up to 80%, and pulmonary biopsies by endobronchial ultrasound, which are reduced up to 82%. This latter result might be due to the so-called "distraction effect" which led pneumologists, like other specialists, to divert their attention almost exclusively toward fighting SARS-CoV-2. The assessment of de Pelsemaeker et al. does not embrace other fields of diagnostic cytopathology, apart from those mentioned. Therefore, their work creates a skewed perception of the actual contribution of cytopathology to diagnosis and disease management, thereby relegating its role to that of a mere screening tool, which can be interrupted and postponed until the end of the emergency without detrimental consequences for patients. Therefore, a multi-institutional effort involving cytopathology laboratories worldwide is warranted to reinforce the impression of cytology not only as a screening tool but also as an autonomous, fullyfledged diagnostic procedure even during the COVID-19 pandemic.



Acknowledgment

We thank Dr. Paola Merolla for editing the manuscript.

Conflict of Interest Statement

The authors declare no potential conflicts of interest.

References

Funding Sources

The authors have not declared a specific grant for this paper from any funding agency in the public, commercial, or not-forprofit sectors.

- Pambuccian SE. The COVID-19 pandemic: implications for the cytology laboratory. J Am Soc Cytopathol. 2020 May-Jun;9(3):202-11.
- 2 Troncone G, Hofman P. Pathologists and the coronavirus distraction effect. J Clin Pathol. 2020 Jun; jclinpath-2020-206807. Epub ahead of print.
- 3 Gosney JR, Hofman P, Troncone G, Lopez-Rios F. Cellular pathology in the COVID-19 era: a European perspective on maintaining quality and safety. J Clin Pathol. 2020 Jun; jclinpath-2020-206789. Epub ahead of print.
- 4 de Pelsemaeker M-C, Guiot Y, Vanderveken J, Galant C, Van Bockstal MR. The impact of the Covid-19 pandemic and the associated Belgian governmental measures on cancer screening, surgical pathology and cytopathology. Pathobiology. 2020 Jul. Epub ahead of print.
- 5 Vigliar E, Iaccarino A, Bruzzese D, Malapelle U, Bellevicine C, Troncone G. Cytology in the time of coronavirus disease (covid-19): an Italian perspective. J Clin Pathol. 2020 Apr;jclinpath-2020-206614. Epub ahead of print.

Pathobiology DOI: 10.1159/000509958