



## Postmodernism and the decline of the clinical autopsy

Marco Dell'Aquila<sup>1,2</sup> · Giuseppe Vetrugno<sup>3</sup> · Simone Grassi<sup>3</sup> · Egidio Stigliano<sup>1,2</sup> · Antonio Oliva<sup>3</sup> · Guido Rindi<sup>1,2</sup> · Vincenzo Arena<sup>1,2</sup>

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Clinical autopsy is in decline, and its rates have been falling all over the world in the last decades, with important implications on medical education [1]. Several explanations have been proposed: The most prominent sees a lack of interest from clinicians that think the autopsy can add little or nothing to what is already known from imaging and diagnostic techniques.

These explanations are not entirely convincing as there still exist relevant discrepancies between diagnostic presumptions and autopsy findings [2]. But what if the decline of clinical autopsy is a result of a complex social and cultural phenomenon, influencing both the clinician and the pathologist attitude towards it?

In “Birth of the Clinic,” Foucault argues that the birth of modern medicine was made possible by an epistemological change encompassing the bodies of knowledge implicated in the production of knowledge itself [3]. The change pivoted the discovery of anatomic pathology and the development of a medical gaze founded on the anatomic-clinical correlation [3]. However, if we consider that clinical medicine has its foundation on this correlation, we should interpret the decline of the clinical autopsy as a further leap of the medical gaze itself. The evolution in biomedical technologies brought to a shift from the surface of the body to the inner organs, and then to cellular, subcellular, and molecular levels

[4, 5]; technological breakthroughs allowed for more precise and sophisticated characterizations of diseases, encompassing immunological, genetic, and molecular features; changing the definition of illnesses; and overcoming the anatomic-clinical correlation.

But does that mean that a new paradigm in the perception of the body and of disease has taken over? This would dematerialize diseases, abstracting them from their anatomical dimension and providing new definitions based on functional, biochemical, molecular, and imaging parameters. Illnesses would detach from the anatomic-clinical correlation, entering an abstract dimension, closer to a functionalist view of the medical disciplines.

We should also consider that many pathologists are not interested in autopsies, while many pathology subspecialties are well-recognized; performing autopsies is often considered a burden on the routine workload [6].

The decline of the clinical autopsy may represent a symptom of a shift of greater extent in the epistemology of medicine. Postmodernism and its lack of faith in grand narratives did not spare medicine; an evolution towards smaller, sectorial narratives took over. In this framework, such lack of confidence in grand narratives has definitely affected the clinical autopsy, which represents the paramount grand narrative of medicine: It is the most spectacular moment in which the clinical history, the effects of medical, and surgical treatments are put under scrutiny, and they are thereafter made real and transformed into sound anatomical and pathological findings.

On the other hand, surgical pathology provides a thorough but sectorial narrative of diseases, often detached from the general clinical context. The grand narrative of clinical autopsy has been substituted by the myriads of small narratives of surgical pathology.

Postmodernism is a cultural, artistic, and literary phenomenon following modernism. While modernism was characterized by the rising of the industrial society and by the faith in grand narratives in explaining the world, postmodernism is generally viewed both as a reaction and as an

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Guido Rindi and Vincenzo Arena have equal contribution

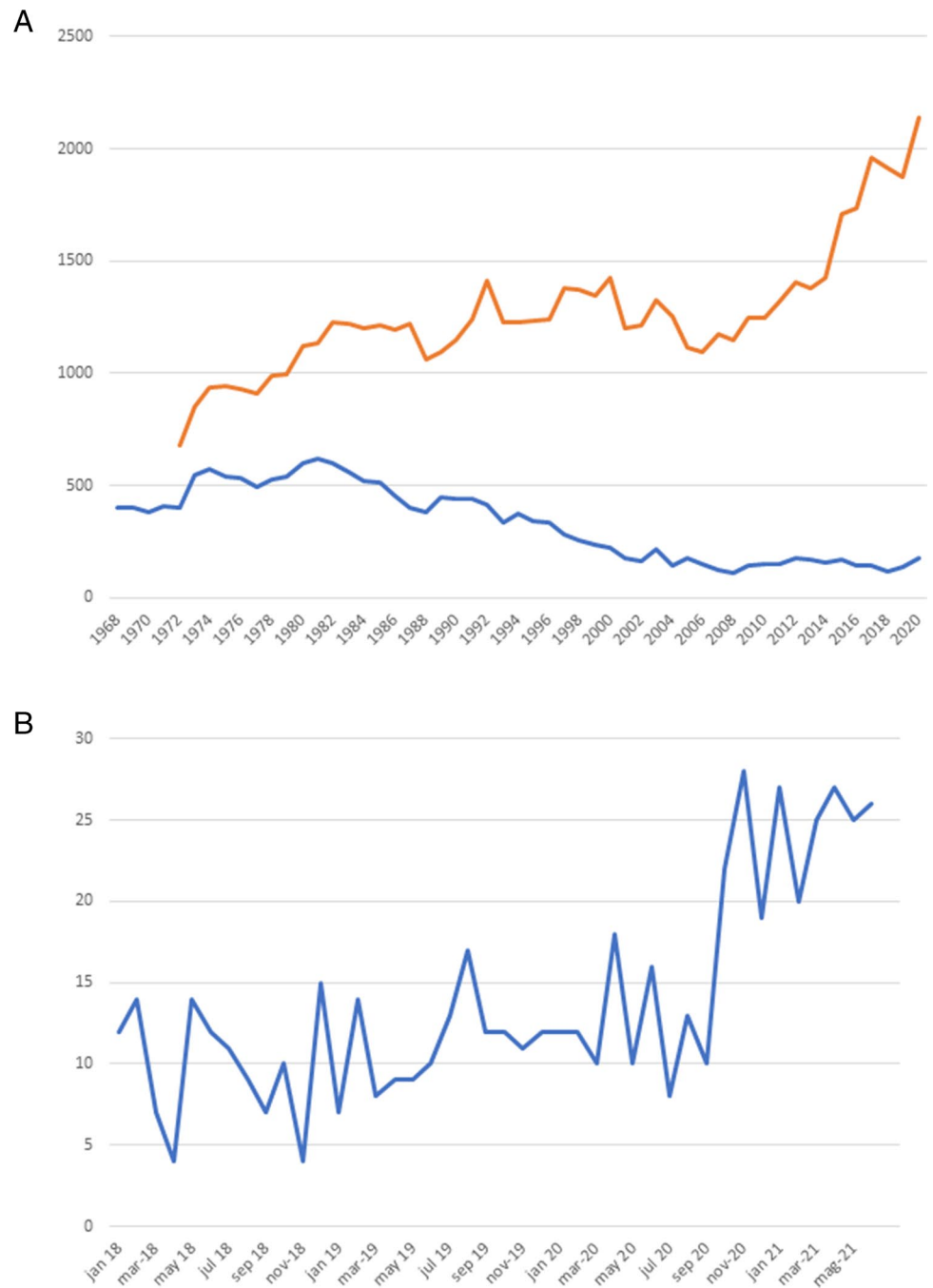
✉ Marco Dell'Aquila  
mzrk07@gmail.com

<sup>1</sup> Section of Anatomic Pathology, Department of Life Sciences and Public Health, Università Cattolica del Sacro Cuore, Rome, Italy

<sup>2</sup> Anatomic Pathology Unit, Department of Woman and Child Health and Public Health, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy

<sup>3</sup> Department of Health Surveillance and Bioethics, Section of Legal Medicine, Fondazione Policlinico Universitario A. Gemelli IRCCS, Università Cattolica Del Sacro Cuore, Rome, Italy

**Fig. 1** **A** The time series of clinical autopsies at our institution (blue) and the total number of deaths (orange). **B** The monthly time series in autopsy requests from January 2018 to June 2021



overtaking of modernism, with disillusionment in the capacity of grand narratives in improving our understanding of the world. As such, postmodernism has been viewed as a nihilistic, relativistic, and somehow techno-centered cultural phenomenon [7, 8]. The rise and the development of the clinical autopsy occurred in the historical and cultural framework of modernism, thus contributing to the development of modern medicine. In order to pursue a grand narrative of disease, modern medicine needed the clinical autopsy.

In the context of medical practice, postmodernism has seen the rising of diagnosis-related groups (DRG). Even

though this system innovated the assessment of healthcare costs and the management of hospital resources, it also posed incentives to the creation of smaller, specialized practices with specific clinical and surgical pathways capable of managing only specific subsets of DRGs, leading to overspecialization [9]. In this context, the role of the pathologist would provide the limited DRG-based narration of disease necessary to this organization of medical practice. The clinical autopsy would simply be out of the cultural horizon.

However, a growing consensus argues that postmodernism is over, even though it is not clear what could be coming

after it and whether “post-postmodernism” would actually be bringing forth a new and original episteme [10].

The Sars-CoV-2 pandemic forced the medical class to face the difficult challenge to understand, treat, and finally overcome the rising of a new disease fast and efficiently. Despite the essential role played by clinical autopsy in defining the epidemiology and the physiopathology of pandemics and despite the high number of COVID-19-related deaths in Italy and worldwide, we witnessed a reluctant attitude towards the practice of autopsy. Indeed, only autopsies on a large series can reliably infer the relationship existing between COVID-19 and variables like age and comorbidities or organ-specific findings. Of note, at our institution, we documented a slight tendency towards increase of the autopsy paralleling the increase in deaths. Figure 1A shows the time series of clinical autopsies at our institution in blue, while in orange is the total number of deaths; Fig. 1B on the other hand shows the monthly time series in autopsy requests from January 2018 to June 2021. This is likely related to the Sars-CoV-2 pandemic and the clinician demand for better understanding of COVID-19 disease.

If we consider that only the clinical autopsy can provide the pathological and theoretical instruments necessary for a complete understanding of disease, its reevaluation will return the medical class the fundamental tool for disease understanding as particularly needed in this historical moment; however, a change in the cultural framework of medicine would have to occur for this change to take place.

We do not know what the end of postmodernism could represent for medicine, the medical class, and medical education; however, the Sars-CoV-2 pandemic showed that the clinical autopsy is still fundamental to medicine confirming its paramount role in the understanding of disease.

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