JPTM
Journal of Pathology and Translational Medicine 2024; 58: 43-44
https://doi.org/10.4132/jptm.2023.12.04

LETTER TO THE EDITOR

Response to comment on "A stepwise approach to fine needle aspiration cytology of lymph nodes"

Yosep Chong[1], Gyeongsin Park[1], Hee Jeong Cha[2], Hyun-Jung Kim[3], Chang Suk Kang[4], Jamshid Abdul-Ghafar[1], Seung-Sook Lee[5]

[1]Department of Hospital Pathology, College of Medicine, The Catholic University of Korea, Seoul;
[2]Department of Pathology, Ulsan University Hospital, University of Ulsan College of Medicine, Ulsan;
[3]Department of Pathology, Inje University Sanggye Paik Hospital, Seoul;
[4]Department of Pathology, Samkwang Medical Laboratories, Seoul;
[5]Department of Pathology, Korea Institute of Radiological and Medical Sciences, Seoul, Korea

To the Editor,

We read Caputo et al.'s letter [1] regarding our recently published review, "A Stepwise Approach to Fine Needle Aspiration Cytology of Lymph Nodes," with great interest and we really appreciate to their keen observation and critique to our review [2]. Their critique of our publication focuses on three primary issues: (1) The Sydney system's strong recommendation for reporting the nosologic entity's nature (lymphoid/metastatic) [3]. (2) Our proposed stepwise system's exclusive focus on morphology, overlooking ancillary techniques like flow cytometry and polymerase chain reaction. (3) The heightened risk of malignancy in the AUS-ALUS (atypical, undermined significance–atypical lymphoid uncertain significance) category, as highlighted in Gupta et al.'s study [4], attributed mainly to the non-use of ancillary techniques.

While we align with the Sydney system's recommendation to identify the nosologic entity and integrate ancillary tests in the diagnostic process, our approach in the review was broader. In Fig. 10's diagnostic algorithm, we referenced "sufficient features for malignancy," intending to encompass all feasible test findings, including morphology, immunocytology, and molecular tests. This was not explicitly stated, but it was implied [2].

Our focus initially was on the morphological features of lymph node fine needle aspiration cytology (FNAC), acknowledging that ancillary tests are not always accessible. In Korea, for instance, excisional biopsy on lymph nodes post-FNAC is common, with most ancillary testing conducted on histologic sections. This preference stems from the rapid and cost-effective nature of excisional biopsies specifically in Korean medical environment. Korean clinicians and patients often opt for confirmatory diagnoses involving more comprehensive sample analyses.

Rapid advancements in molecular pathology have undoubtedly enhanced lymphoma understanding and treatment. However, many countries still struggle to fully incorporate these tests in cytodiagnostics and it sometimes causes subsequent confusion during the diagnostic process in the clinical practice. The study by Gupta et al. [4], also applying the Sydney system, reflects this limitation in India, as ancillary techniques were scarcely employed. Recent detailed molecular research on lymphoid neoplasms has divided the academic community, resulting in the development of two distinct classification systems on histologic diagnosis: the 5th edition of the World Health Organization classification (WHO-HAEM5) and the International Consensus Classification (ICC), which brings many confusions to the practicing pathologists in the daily practice [5]. On the other hand, the Sydney system for cytologic diagnosis, in our view, is versatile, accommodating both contexts where molecular pathology is feasible and scenarios reliant solely on morphological evaluation [3,6].

We concur with Caputo et al.'s observations [1] and aimed our review to enrich the diagnostic process, focusing on morphological details. Our comprehensive algorithm, incorporating various morphological features, seeks to streamline and improve diagnostic accuracy. In scenarios where specimen quantity limits further testing, or when additional molecular tests are impractical due to cost, infrastructure, or even sociocultural constraints,

Received: November 27, 2023 **Accepted:** December 4, 2023

Corresponding Author: Yosep Chong, MD, PhD
Department of Hospital Pathology, Uijeongbu St. Mary's Hospital, College of Medicine, The Catholic University of Korea, 271 Cheonbo-ro, Uijeongbu 11765, Korea
Tel: +82-32-820-3160, Fax: +82-32-820-3877, E-mail: ychong@catholic.ac.kr

pISSN 2383-7837
eISSN 2383-7845

© 2024 The Korean Society of Pathologists/The Korean Society for Cytopathology
This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (https://creativecommons.org/licenses/by-nc/4.0) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

our approach offers direct support to cytopathologists. Hopefully, further validation studies on the Sydney System using real cases of lymph node FNAC in Korea or Asian population should be followed for the reconfirmation of the clinical efficacy as proven in previous studies [4,6]. Looking forward, we anticipate that advancements in digital cytopathology and artificial intelligence image analysis will enhance cancer diagnosis, subtype differentiation, and molecular mutation prediction in near future, as Caputo et al. also suggested [7-9].

Ethics Statement

Not applicable.

Availability of Data and Material

The datasets generated or analyzed during the study are available from the corresponding author on reasonable request.

Code Availability

Not applicable.

ORCID

Yosep Chong https://orcid.org/0000-0001-8615-3064
Gyeongsin Park https://orcid.org/0000-0002-9727-5566
Hee Jeong Cha https://orcid.org/0000-0001-8744-5747
Hyung-Jung Kim https://orcid.org/0000-0002-6617-4578
Jamshid Abdul-Ghafar https://orcid.org/0000-0002-6575-8870

Author Contributions

Conceptualization: YC, GP, HJC, HJK, CSK, SSL. Supervision: GP, SSL. Visualization: YC. Writing—original draft: YC. Writing—review & editing: YC, GP, HJC, HJK, CSK, SSL. Approval of final manuscript: all authors.

Conflicts of Interest

Y.C., a contributing editor of the *Journal of Pathology and Translational Medicine*, was not involved in the editorial evaluation or decision to publish this article. All remaining authors have declared no conflicts of interest.

Funding Statement

No funding to declare.

References

1. Maffei E, Ciliberti V, Zeppa P, Caputo A. Comment on "A stepwise approach to fine needle aspiration cytology of lymph nodes". J Pathol Transl Med 2024; 58: 40-2.
2. Chong Y, Park G, Cha HJ, et al. A stepwise approach to fine needle aspiration cytology of lymph nodes. J Pathol Transl Med 2023; 57: 196-207.
3. Al-Abbadi MA, Barroca H, Bode-Lesniewska B, et al. A proposal for the performance, classification, and reporting of lymph node fine-needle aspiration cytopathology: the Sydney system. Acta Cytol 2020; 64: 306-22.
4. Gupta P, Gupta N, Kumar P, et al. Assessment of risk of malignancy by application of the proposed Sydney system for classification and reporting lymph node cytopathology. Cancer Cytopathol 2021; 129: 701-18.
5. Falini B, Martino G, Lazzi S. A comparison of the International Consensus and 5th World Health Organization classifications of mature B-cell lymphomas. Leukemia 2023; 37: 18-34.
6. Caputo A, Ciliberti V, D'Antonio A, et al. Real-world experience with the Sydney System on 1458 cases of lymph node fine needle aspiration cytology. Cytopathology 2022; 33: 166-75.
7. Caputo A, Fraggetta F, Cretella P, et al. Digital examination of LYmph node CYtopathology Using the Sydney system (DELYCYUS): an international, multi-institutional study. Cancer Cytopathol 2023; 131: 679-92.
8. Thakur N, Alam MR, Abdul-Ghafar J, Chong Y. Recent application of artificial intelligence in non-gynecological cancer cytopathology: a systematic review. Cancers (Basel) 2022; 14: 3529.
9. Park HS, Chong Y, Lee Y, et al. Deep learning-based computational cytopathologic diagnosis of metastatic breast carcinoma in pleural fluid. Cells 2023; 12: 1847.