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Correspondence: S. Feng, State Key Laboratory of Experimental Hematology, National Clinical Research Center for Blood Diseases, Institute of Hematology and Blood Diseases Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, No. 288 Nanjing Road Heping District, Tianjin 300052, China (szfeng@ihcams.ac.cn); M. Hong, Institute of Hematology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, No. 1277 Jiefang Avenue, Wuhan, Hubei 430022, China (hmxh@hust.edu.cn).

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Surge of Mpox Cases in Lombardy Region, Italy, October 2023—January 2024

To the Editor—We read with interest the article by Grov et al in which the authors found, by means of a survey in the United States, that behavioural changes occurred during the 2022 mpox outbreak to reduce mpox risk [1]. Nevertheless, 65% of respondents did not yet receive a vaccine dose at the end of the study period (November 2022) suggesting that most individuals should be considered vaccine unexposed in case of mpox resurgence [1]. Multiple factors including the implementation of Modified Vaccinia Ankara-Bavarian Nordic (MVA-BN) vaccine for at risk individuals might have contributed to the subsequent considerable reduction in Mpox cases observed during fall/winter 2022. Nevertheless, ongoing Mpox cases continued to occur worldwide in 2023 [2, 3, 4]. According to the World Health Organization, as of December 2023, 93 030 cases have occurred worldwide of whom Italy contributed with 989 cases [5]. In particular, in the period ranging between 1 January and 30 September 2023, 3 mpox cases have been diagnosed in Lombardy region, Italy, whereas 44 cases occurred in the period October 2023 to January 2024 (Figure 1). Forty out of 44 (90.9%) mpox cases diagnosed in the period October 2023 to January 2024 were men who have sex with men (MSM), 12 (27.3%) were people with human immunodeficiency virus (HIV), and 13 (29.5%) were pre-exposure prophylaxis (PrEP) users. Ten subjects (22.7%) were fully MVA-BN vaccinated during the 2022 vaccination campaign, 2 vaccinated for smallpox during childhood, and 1 case was a reinfection. Four out of 7 individuals who required treatment (6 with tecovirimat and 1 with cidofovir) were unvaccinated, and 2 unvaccinated subjects were hospitalized. The ongoing outbreak of mpox continues to primarily

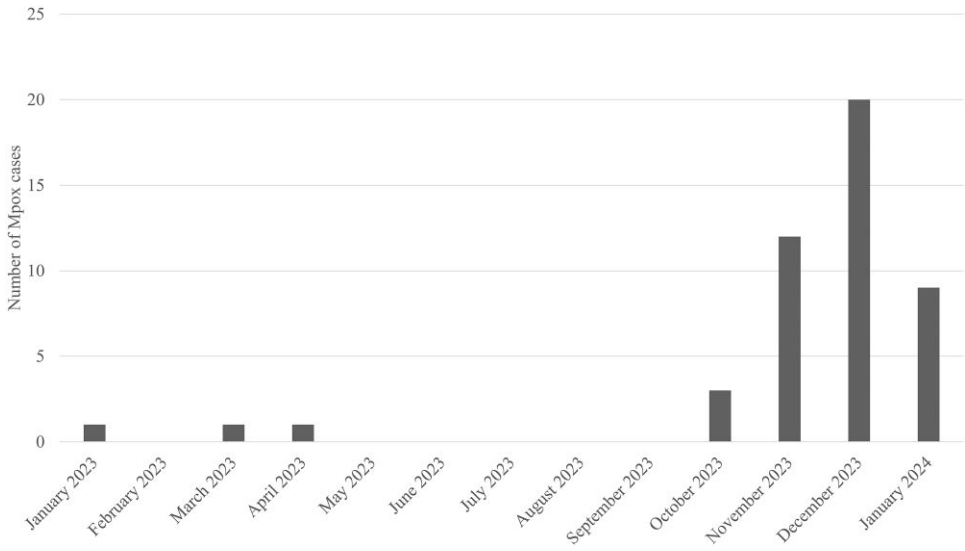

Figure 1. Monthly number of mpox cases, according to the date of symptoms onset, observed in Lombardy region, Northern Italy, in the period January 2023–January 2024.

affect MSM without evidence of sustained transmission outside this network [3, 4, 5]. Although a prompt response by the Regional Health Authorities in terms of activation of the vaccination campaign against mpox with an immediate participation by the targeted communities, a significant reduction in both offer and interest in such strategy was recorded throughout 2023 as mpox cases faded during fall/winter 2022 (Supplementary Figure 1). Although between November and December 2023 a slight overall decrease (−6.3%) in mpox cases was observed in the European region [5], the increase we observed in Italy between November and December (+180%) was in line with other European countries such as Austria (+150%), France (+130%), and Spain (+84%).We observed 4 mpox cases with sexual partners outside the MSM networks (1 cis, 1 trans gender woman, and 2 cis men). This finding is of interest as we believe that individuals outside the sustained networks of transmission would be less prone to receive information regarding mpox preventive strategies, as well as less aware of vaccination preventive strategies that have been implemented [6]. Moreover, we found that 22.7% of individuals diagnosed during the last 3 months of 2023 were MVA-BN exposed in 2022. These findings are partially expected considering the estimated MVA-BN vaccine effectiveness [7], the observed progressive reduction in antibodies titer in subjects exposed to MVA-BN [8,9] and an estimated limited vaccination coverage [1]. The reinforcement of MVA-BN vaccine administration and informative interventions to control and reduce mpox recrudescence are warranted.

Supplementary Data

Supplementary materials are available at *Clinical Infectious Diseases* online. Consisting of data provided by the authors to benefit the reader, the posted materials are not copyedited and are the sole responsibility of the authors, so questions or comments should be addressed to the corresponding author.

Notes

Author contributions. D. Mo., A. Gi.: writing original draft preparation; D. Mo., A. Gi., D. Mi., A. M.: writing—review and editing; D. Mo., A. R. R., R. R., D. T., A. R., S. V., M. G., D. R., D. B.: were directly involved in the patient care; A. P., N. C., A. M., F. R., D. Mi.: performed the microbiological assays; D. Mo., A. G., L. V., D. C., S. N., D. Mi., M. R. G., A. C., S. A., A. Go., G. R., F. B., F. A., A. V. M., G. M., F. C., S. V.: reviewed and supervised the manuscript. All authors have read and agreed to the published version of the manuscript.

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Ethical statement. Ethical approval was not needed for this study because human samples were collected as part of Regional Health Authorities' surveillance activities, and the analysis was conducted as part of public health practice.

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Davide Moschese,[1] Angelo Roberto Raccagni,[2] Andrea Giacomelli,[3] Antonio Piralla,[4] Roberto Rossotti,[5] Alessandro Raimondi,[5] Daniele Tesoro,[6] Luigi Vezzosi,[7] Maurizio Gulletta,[8] Nicola Clementi,[9] Serena Venturelli,[10] Susanna Benardon,[11] Davide Ricaboni,[12] Dario Bernacchia,[13] Alessandro Mancon,[14] Francesca Rovida,[15,4] Federica Attanasi,[7] Danilo Cereda,[7] Maria Rita Gismondo,[14,16] Andrea Gori,[16,17,18] Giuliano Rizzardini,[1] Spinello Antinori,[3,16] Fausto Baldanti,[15,4] Angelo Valerio Marzano,[11,19] Giulia Marchetti,[6,20] Francesco Castelli,[8,21] Antonella Castagna,[2,22] Silvia Nozza,[2,22,a] and Davide Mileto;[14,a] Mpox Lombardy study group[b]

[1]I Division of Infectious Diseases, Luigi Sacco Hospital, ASST Fatebenefratelli Sacco, Milan, Italy; [2]Infectious Diseases Unit, Vita Salute San Raffaele University, Milan, Italy; [3]III Division of Infectious Diseases, Luigi Sacco Hospital, ASST Fatebenefratelli Sacco, Milan, Italy; [4]Microbiology and Virology Department, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy; [5]Department of Infectious Diseases, ASST Grande Ospedale Metropolitano Niguarda, School of Medicine and Surgery, Milan, Italy; [6]Unit of Infectious Diseases, ASST Santi Paolo e Carlo, Milan, Italy; [7]General Directorate of Welfare, Regione Lombardia, Milan, Italy; [8]Department of Infectious and Tropical Diseases, ASST Spedali Civili, Brescia, Italy; [9]Laboratory of Microbiology and Virology, IRCCS San Raffaele Scientific Institute, Milan, Italy; [10]Infectious Diseases Unit, ASST Papa Giovanni XXIII, Bergamo, Italy; [11]Dermatology Unit, Fondazione IRCCS Ca' Granda, Ospedale Maggiore Policlinico, Milan, Italy; [12]Infectious Diseases Unit, Sant'Anna Hospital, Como, Italy; [13]Infectious Diseases Unit, ASST Ovest Milanese, Legnano General Hospital, Legnano, Italy; [14]Laboratory of Clinical Microbiology, Virology and Bioemergencies, Luigi Sacco Hospital, ASST Fatebenefratelli Sacco, Milan, Italy; [15]Department of Clinical-Surgical, Diagnostic, and Pediatric Sciences, University of Pavia, Pavia, Italy; [16]Department of Biomedical and Clinical Sciences L. Sacco, University of Milan, Milan, Italy; [17]Centre for Multidisciplinary Research in Health Science (MACH), University of Milan, Milan, Italy; [18]II Infectious Diseases Unit, Luigi Sacco Hospital, ASST Fatebenefratelli Sacco, Milan, Italy; [19]Department of Pathophysiology and Transplantation, University of Milan, Milan, Italy; [20]Department of Health Sciences, University of Milan, Milan, Italy; [21]Department of Clinical and Experimental Sciences, University of Brescia, Brescia, Italy; and [22]Infectious Diseases Unit, IRCCS San Raffaele Scientific Institute, Milan, Italy

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[a]S. N. and D. M. have contributed equally to this work.

[b]Mpox Lombardy study group: Paolo Bonfanti, Lorenzo Biasioli, Raffaele Bruno, Maria Vittoria Cossu, Chiara Fusetti, Samuel Lazzarin, Massimo Locatelli, Manuela Morosi, Marco Piscaglia, Luigi Pusterla, Giacomo Pozza, Stefano Ramoni, Stefano Rusconi, Marco Rizzi, Alberto Rizzo, Federico Sabaini, Federica Salari, Michela Sampaolo, Massimo Puoti, Marcello Tirani, Lina Rachele Tomasoni.

Correspondence: A. Giacomelli, III Infectious Diseases Unit, L. Sacco Hospital, Via G.B. Grassi 74, 20157 Milano, Italy (andrea.giacomelli@unimi.it; andrea.giacomelli@asst-fbf-sacco.it).

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The Role of Fosfomycin-Containing Regimens in Reducing Mortality From Infections Caused by Metallo-β-Lactamase–Producing Enterobacterales

To the Editor—We read with great interest the recent article by Falcone et al [1] on the clinical features and outcomes of infections caused by metallo-β-lactamase (MBL)–producing Enterobacterales. In their prospective observational study, 343 patients were included, and the 30-day mortality was 29.7%. In a previous prospective, observational study of patients with MBL bloodstream infections, it was shown that the combination of ceftazidime-avibactam (CZA) plus aztreonam (ATM) was associated with reduced mortality risk compared with colistin-containing regimens [2]. The combination of CZA + ATM is recommended in current guidelines as the first-line option against infections by MBL-producing Enterobacterales [3–5]. It is noteworthy in the commented study that although the combination of CZA + ATM did lead to lower mortality (22.3%) compared with colistin-containing regimens (50%) or cefiderocol-containing regimens (33%), it was not the best treatment option in terms of patient survival. Specifically, patients who received "other active antibiotics" (OAAs) presented a 30-day mortality rate of 13.5% (5 of 37). However, the Kaplan–Meier survival curve of the OAA group is reversely presented with the CZA + ATM curve, leading to some confusion (Figure 3). In addition, there is a discrepancy in mortality rates for the OAA group; as noted in the Results section, mortality was 13.5% (5 of 37), while in Figure 2, the number presented above the corresponding bar was even lower (3 of 37, 8.1%; $P = .046$ versus CZA + ATM, χ^2 test). A more detailed look at the regimens used in the OAA group (Table 3) reveals that most patients received a fosfomycin-containing regimen; interestingly, 15 of 37 had received fosfomycin monotherapy, 2 of 37 received a combination with meropenem or gentamycin, respectively, while 16 patients received tigecycline ± fosfomycin, without any further clarification. Although the mortality by individual regimen is not provided in the article, the worst mortality scenario for the fosfomycin-containing regimen could be calculated if we attribute all 5 deaths in the OAA group to the fosfomycin-containing regimen and consider the minimum number of patients who could have been included in this group, which is 18 (counting that at least 1 patient in the tigecycline ± fosfomycin group received fosfomycin in addition to tigecycline). In this case, the worst mortality rate for the fosfomycin-containing regimen would be 5 of 18 (27.7%), which is the second-best treatment outcome. However, given the fact that 17.5% of the enrolled patients had complicated urinary tract infections, for which tigecycline is not an option, while 75.5% of cases suffered from bloodstream infections and hospital-acquired or ventilator-associated pneumonia, for which tigecycline should not be used as monotherapy, it is tempting to speculate that a significant portion of the tigecycline ± fosfomycin subgroup may have received combination therapy with fosfomycin. This would be interpreted as an even lower mortality rate for the fosfomycin-based regimen in the OAA group; nevertheless, these important data are lacking. In addition, the in vitro susceptibility rate of MBL-producing Enterobacterales to fosfomycin is quite sufficient (67.1%), according to Table 1. However, we are cautious in interpreting these data since susceptibility and resistance rates for several antibiotics are presented in reverse order. Taking into consideration that this is the largest clinical study on MBL-producing Enterobacterales infections published to date, it would be very helpful if the authors could further clarify the promising results of the OAA group, with a special emphasis on the role of fosfomycin and the type of infection.

Note

Potential conflicts of interest. S. F. A. reports serving as a consultant to Pfizer, GSK, Gilead, and Menarini; research grants from Pfizer, Gilead, and Elpen Pharmaceutical; honoraria for lectures from Pfizer, Gilead, GSK, MSD, Angelini, Norma, and Uni-Pharma S.A.; and support for attending meetings and/or travel from Pfizer and Angelini. M. M. reports serving as a consultant to Pfizer, GSK, Gilead, and Menarini; research grants from Elpen Pharmaceutical; honoraria for lectures from Pfizer, Gilead, GSK, MSD, Menarini, Norma, Elpen Pharmaceutical, 3M, and Uni-Pharma S.A.; and support for attending meetings and/or for travel from Pfizer, MSD, GSK, and Gilead.

Stelios F. Assimakopoulos and Markos Marangos

Department of Internal Medicine and Division of Infectious Diseases, University of Patras Medical School, Patras, Greece

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Correspondence: S. F. Assimakopoulos, Division of Infectious Diseases, Department of Internal Medicine, Medical School, University of Patras, University Hospital of Patras, Rion, Patras 26504, Greece (sassim@upatras.gr).

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