CORRESPONDENCE

Meningococcal Disease Outbreak Associated with Disco Attendance

To the Editor—The recent article by Cookson et al. [1] on the probable association between Neisseria meningococcal outbreaks and disco attendance was both informative and thought-provoking. That team’s effort to explore the origin of epidemiologic outbreaks of this disease is all the more exemplary given its rapid and often fatal progression in a relatively young population.

Upon review of the article, however, we were concerned about the absence of female patients among the case-patients who attended disco A. Since meningococcal disease is primarily spread through respiratory contact, the close proximity of dancing and kissing would make such transfer theoretically easy. Perhaps one explanation for this would be a predominance of men at disco A, though this was not clarified in the article. In addition, the inclusion of the individual with only a Gram-stained skin biopsy as a case-patient with meningococcal disease may have had a falsely significant contributing impact on the overall study. This is particularly true for such a small case number (8). It would have been interesting to hear how the absence of this case would have affected the overall results. Finally, it was noted that disco A was never shut down during the outbreak, and patrons received no vaccination. While household contacts and schoolmates of those affected were treated, if those who visited disco A were truly at risk, it would be expected that the outbreak would have continued there.

Moreover, it would have lent the study greater credence to be expected that the outbreak would have continued there. The male dominance among case-patients is an interesting feature of this outbreak. In the United States, sporadic meningococcal disease occurs somewhat more often among males (relative risk, 1.3; 95% confidence interval, 1.0–1.6) [3]. The absence of female patients among disco-related cases might reflect social groupings or other behavioral risk factors, but because we included sex as one of the matching criteria in the case-control study, we have no information about differences between the sexes in behaviors among patrons of the disco.

We included the case-patient with the biopsy because this patient’s clinical symptoms were quite specific for complications associated with meningococcemia (Waterhouse-Friderichsen syndrome). Because this outbreak was small, the statistical power of our study was limited. This is the case with most such outbreaks, including the recent outbreak of meningococcal disease linked to a sports club, for which only 7 case-patients were identified [4].

Outbreaks of serogroup C meningococcal disease are usually of limited duration, particularly those associated with organizations. In 5 of 8 clusters of serogroup C meningococcal disease cases reported among schools in the United States, all cases occurred within a week; in 7 of the 8 clusters, all cases presented in <4 weeks [5]. Often by the time a cluster of serogroup C meningococcal disease is recognized, the outbreak has subsided, making it unclear whether vaccination would have had any impact. Closing institutions is not a recommended control measure for these events. Additional details regarding evaluation and management of suspected serogroup C meningococcal outbreaks are defined in recent recommendations of the Advisory Committee on Immunization Practices [6].

Behaviors and conditions (e.g., crowding, sharing of drinks, kissing, and active and passive tobacco exposure) common among the disco attendees increased their risk of transmission and acquisition of the disease [7]. However, disease occurrence among disco patrons was likely a sentinel event for emergence of a virulent strain in the community, and as would be expected, the 6 subsequent cases among community members were not linked to disco exposure.

Avery A. Bevin and Anthony J. Viera
Family Practice Department, Naval Hospital Jacksonville, Jacksonville, Florida

References


The opinions or assertions contained herein are the private views of the authors and are not to be construed as official or reflecting the views of the US Navy Medical Department or the Naval Service at large.

Reprints or correspondence: Dr. Anthony J. Viera, Dept. of Family Practice, US Naval Hospital, 2080 Child St., Jacksonville, FL 32214-5227.

The Journal of Infectious Diseases 1999;179:751
This article is in the public domain.

0022-1899

Reply

To the Editor—We are grateful for the timely and thoughtful comments of Bevin and Viera [1] regarding our findings in the outbreak of meningococcal disease in northeastern Argentina [2]. We agree that the male dominance among case-patients is an interesting feature of this outbreak. In the United States, sporadic meningococcal disease occurs somewhat more often among males (relative risk, 1.3; 95% confidence interval, 1.0–1.6) [3]. The absence of female patients among disco-related cases might reflect social groupings or other behavioral risk factors, but because we included sex as one of the matching criteria in the case-control study, we have no information about differences between the sexes in behaviors among patrons of the disco.

We included the case-patient with the biopsy because this patient’s clinical symptoms were quite specific for complications associated with meningococcemia (Waterhouse-Friderichsen syndrome). Because this outbreak was small, the statistical power of our study was limited. This is the case with most such outbreaks, including the recent outbreak of meningococcal disease linked to a sports club, for which only 7 case-patients were identified [4].

Outbreaks of serogroup C meningococcal disease are usually of limited duration, particularly those associated with organizations. In 5 of 8 clusters of serogroup C meningococcal disease cases reported among schools in the United States, all cases occurred within a week; in 7 of the 8 clusters, all cases presented in <4 weeks [5]. Often by the time a cluster of serogroup C meningococcal disease is recognized, the outbreak has subsided, making it unclear whether vaccination would have had any impact. Closing institutions is not a recommended control measure for these events. Additional details regarding evaluation and management of suspected serogroup C meningococcal outbreaks are defined in recent recommendations of the Advisory Committee on Immunization Practices [6].

Behaviors and conditions (e.g., crowding, sharing of drinks, kissing, and active and passive tobacco exposure) common among the disco attendees increased their risk of transmission and acquisition of the disease [7]. However, disease occurrence among disco patrons was likely a sentinel event for emergence of a virulent strain in the community, and as would be expected, the 6 subsequent cases among community members were not linked to disco exposure.

Susan T. Cookson, Anne Schuchat, and William R. Jarvis
National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia

The opinions or assertions contained herein are the private views of the authors and are not to be construed as official or reflecting the views of the US Naval Hospital, 2080 Child St., Jacksonville, FL 32214-5227.

Reprints or correspondence: Dr. Susan T. Cookson, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, GA 30333-2200.