Secondary prevention of meningococcal disease

Penicillin is not recommended in British guidelines

EDITOR,—Bjørn-Erik Kristiansen and Arne-Birger Knapskog call for a change in the current British guidelines on the prevention of meningococcal disease without adequately substantiating their arguments.¹ Their view contradicts the latest guidelines from the Public Health Laboratory Service's Meningococcal Infections Working Group² and will cause confusion when clarity is paramount. The failures in administration of prophylaxis cannot be overcome without clear guidelines and may result in preventable life threatening illness.

The prevention of secondary cases of meningococcal disease in Britain is by chemoprophylaxis with rifampicin, ciprofloxacin, or ceftriaxone for all household and kissing contacts of patients with the disease.² Chemoprophylaxis is effective³; resistance to rifampicin is rare in Britain; and parents are advised to seek medical attention if a contact develops fever or a rash, even if months have elapsed since the illness.⁴ Kristiansen and Knapskog argue that the addition of penicillin could prevent systemic disease but do not provide convincing evidence to support their claim. The Department of Health and the Communicable Disease Surveillance Centre in Britain do not recommend the use of penicillin, and to advocate a change in policy in

the middle of the seasonal increase in disease could adversely affect efforts to prevent secondary disease.

Penicillin may be used to treat patients with coprimary infection (that is, those with active disease at the time of presentation of the index case), in which rifampicin is probably insufficient. Such cases, however, are uncommon.

Rifampicin alone is adequate to clear carriage of pathogenic strains of *Neisseria* in both the index case and contacts. However, most secondary cases occur when there has been a failure in the administration of chemoprophylaxis.⁴ The reasons for such failure are multifactorial but include confusion about and failure to implement chemoprophylactic guidelines when an index case presents; problems with compliance, particularly in young children (for whom intramuscular ceftriaxone might be considered); and failure to appreciate the diagnosis in the index case because of negative results of meningococcal culture or of antigen screening.

Today, owing to the reduction in meningitis due to *Haemophilus influenzae* type b by vaccination, there is more than an even chance that a child with bacterial meningitis in Britain has meningococcal infection.⁵ When bacterial meningitis is suspected or a child presents with fever and a petechial rash, immediate chemoprophylaxis should be offered to all household and kissing contacts of the case. Adhering to current guidelines for prevention can save lives.

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- 1 Kristiansen BE, Knapskog AB. Secondary prevention of meningococcal disease. *BMJ* 1996;312:591-2. (9 March.)
- 2 Public Health Laboratory Service Meningococcal Infections Working Group and Public Health Medicine Environmental Group. Control of meningococcal disease: guidance for consultants in communicable disease control. *Commun Dis Rep CDR Rev* 1995;5:R189-95.
- 3 Report from the Public Health Laboratory Service Communicable Disease Surveillance Centre. *BMJ* 1986;293:1293-4.
- 4 Cooke RPD, Riordan T, Jones DM, Painter MJ. Secondary cases of meningococcal infection among close family and household contacts in England and Wales, 1984-87. *BMJ* 1989;298:555-8.
- 5 Booy R, Hodgson S, Carpenter L, Mayon-White RT, Slack MPE, Macfarlane JA, et al. Efficacy of *Haemophilus influenzae* type b conjugate vaccine PRP-T. *Lancet* 1994;344:362-6.

Ceftriaxone or ciprofloxacin should be considered as first line prophylaxis

EDITOR,—We disagree with several points raised by Bjørn-Erik Kristiansen and Arne-Birger Knapskog in their editorial on secondary prevention of meningococcal disease.¹ Rifampicin eradicates carriage but may not prevent systemic disease. Cases have occurred after prophylaxis with rifampicin as the increased risk lasts for several months.² Høiby *et al* state that cases have been reported during treatment with penicillin.³ In our opinion, concurrent use of rifampicin and phenoxymethylpenicillin is unsatisfactory, and other agents need to be evaluated urgently. Single dose ciprofloxacin has been shown to be effective in eradication.⁴ Single

dose ceftriaxone has been shown to be superior to rifampicin⁵ and has the advantage that it can be given to children and pregnant women. Single dose treatment would have the added benefit of ensuring compliance.

We think that it is now time to consider either ceftriaxone or ciprofloxacin as first line prophylaxis for contacts of patients with meningococcal meningitis.

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- 1 Kristiansen B-E, Knapskog A-B. Secondary prevention of meningococcal disease. *BMJ* 1996;312:591-2. (9 March.)
- 2 Foster G, Panigrahi H, Walker M. Failure of chemoprophylaxis to prevent meningococcal disease. *BMJ* 1986;292:886-7.
- 3 Høiby EA, Moe RJ, Lystad A, Frøholm LO. Phenoxymethylpenicillin treatment of household contacts of meningococcal disease. *Antonie van Leeuwenhoek* 1986;52:255-7.
- 4 Gaunt N, Lambert BE. Single dose ciprofloxacin for the eradication of pharyngeal carriage of *Neisseria meningitidis*. *J Antimicrob Chemother* 1988;21:489-96.
- 5 Schwartz B, Al-Tobaqi A, Al-Ruwais A, Fontaine RE, A'Asi J, Hightower AW, et al. Comparative efficacy of ceftriaxone and rifampicin in eradicating pharyngeal carriage of group A *Neisseria meningitidis*. *Lancet* 1988;i:1239-42.

No evidence exists to support use of penicillin

EDITOR,—Given the current high profile of meningococcal disease in Britain it is extremely important that the *BMJ* should publish an editorial that is firmly evidence based and reflects current guidance available from experts in infectious diseases and communicable disease control. We are thus concerned about Kristiansen and Knapskog's editorial from Norway, which recommends that high risk contacts should be given chemoprophylaxis and preventive treatment with penicillin.¹ While the use of chemoprophylaxis is not disputed, we take issue with their recommendation that household members below the age of 15 should be given penicillin for seven days to protect them from contracting the disease. This recommendation is based on data from a single study, which was published in 1986 in a journal not accessible to most British readers.²

The 1986 citation reports a case series in which it was observed that close contacts aged under 15 of people with meningococcal disease did not develop the disease when given penicillin. This can be criticised on three counts. Firstly, several close contacts developed meningococcal disease shortly after stopping treatment with penicillin, which suggests that penicillin succeeded only in delaying the onset of disease. Secondly, the assertion that penicillin reduces the number of secondary cases relies on the assumption that the findings of a study carried out in Belgium can be directly extrapolated to Norway. To assume that the two groups are directly comparable disregards one of the fundamental rules of epidemiology. Thirdly, a case

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