The factors affecting absorption of local anaesthetic through intact skin have been studied by Evers, who found it necessary to use a thick layer of cream as emulsion droplets in contact with the skin readily became depleted of local anaesthetic. In the same study percutaneous absorption of lignocaine and prilocaine into the systemic circulation was found to be measurable but slight.

As in all local anaesthetic preparations it is necessary to consider the potential for hypersensitive reactions. There is an extensive clinical experience with lignocaine and prilocaine given by injection, and true allergic reactions are extremely rare. There is no reason to believe that these agents applied topically will behave differently.

We acknowledge the help of Astra Pharmaceuticals Ltd.

References


Correspondence to Dr M Radford, Department of Child Health, Centre Block, Southampton General Hospital, Southampton SO9 4XY, England.

Received 30 June 1986.

Meningitis due to Haemophilus influenzae resistant to ampicillin and chloramphenicol

A P FRAISE, A C G MEEKS, AND J E RICHARDS

Department of Microbiology/Public Health Laboratory and Department of Child Health, Leicester Royal Infirmary

SUMMARY A case of ampicillin and chloramphenicol resistant Haemophilus influenzae meningitis successfully treated with cefotaxime is described.

Meningitis due to Haemophilus influenzae resistant to chloramphenicol and ampicillin is a recognised problem in the United States but has only been reported once in the United Kingdom. To our knowledge the case reported here is the first British case to be treated with cefotaxime.

Case report

A previously healthy 7 month old boy presented in
March 1986 with a one day history of lethargy, diarrhoea, and vomiting. On examination he was found to be febrile (38°C) with pronounced neck and spinal rigidity. Initial investigation revealed a leucocytosis of 25 000 x 10^6 cells/l (83% polymorphs) and blood glucose concentration of 4-5 mmol/l (81 mg/100 ml). Cerebrospinal fluid (CSF) findings were as follows: white blood cell count 4800 x 10^6/l (85% polymorphs and 15% lymphocytes), red blood cell count 240 x 10^6/l, protein: >1.0 g/l (100 mg/100 ml), glucose: <1.0 mmol/l. A Gram stain of the deposit showed pleomorphic Gram negative rods.

According to local practice treatment with chloramphenicol and penicillin was begun.

After overnight incubation H. influenzae, capsular type b, biotype 1, was isolated from CSF and blood. The organism was subsequently found to be resistant to chloramphenicol and ampicillin but sensitive to cefotaxime and co-trimoxazole by comparative disc diffusion methods, using a local wild strain of H. influenzae as the control. Resistance to ampicillin was confirmed by showing production of β-lactamase, using a plate incorporation acidometric method (minimal inhibitory concentration being greater than 64 mg/l).

The minimal inhibitory concentration to chloramphenicol was 16 mg/l, and production of acetyl transferase activity was shown by the rapid method of Slack et al.3

Treatment was changed to cefotaxime (150 mg/kg/day in two divided doses). Repeat lumbar puncture after six days revealed a reduction in white blood cell count to 760 x 10^6/l (56% polymorphs), a protein of 0-4 g/l, and a glucose of 2-1 mmol/l. CSF culture for bacteria yielded negative results. The CSF was bactericidal against the organism to a titre of 16. The child made a slow but complete recovery with 10 days' treatment.

Discussion

H. influenzae type b resistant to ampicillin and chloramphenicol was first reported in Bangkok in 1979 as the cause of an outbreak of meningitis.4 A case of skin infection followed by respiratory infection reported in the UK in 1982 was subsequently found to be due to a non-capsule strain.5 The first British report of a capsulate strain causing meningitis was successfully treated with latamoxef and co-trimoxazole.

Multiple resistant H. influenzae is currently increasing in prevalence in the USA to the extent that extended range (third generation) cephalosporins have been considered in the first line treatment of childhood meningitis.6 Although the number of British reports is still small, any increase may force a similar review of our ‘standard’ treatment.

We thank the Public Health/Microbiology Laboratory at the John Radcliffe Hospital, Oxford, for their confirmation of the capsular typing and biotype of the isolate.

References


Correspondence to Dr A P Fraise, Department of Microbiology/ Public Health Laboratory, Leicester Royal Infirmary, Leicester, England.

Received 9 July 1986
Meningitis due to Haemophilus influenzae resistant to ampicillin and chloramphenicol.
A P Fraise, A C Meeks and J E Richards

Arch Dis Child 1986 61: 1134-1135
doi: 10.1136/adc.61.11.1134

Updated information and services can be found at:
http://adc.bmj.com/content/61/11/1134

These include:

Email alerting service
Receive free email alerts when new articles cite this article.
Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/