

# The Journal of Laryngology and Otology

EDITED BY  
G. H. BATEMAN

ASSISTANT EDITOR  
LIONEL TAYLOR

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# The Journal of Laryngology and Otology

(FOUNDED in 1887 by MORELL MACKENZIE and NORRIS WOLFENDEN)

EDITED BY

G. H. BATEMAN

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LIONEL TAYLOR

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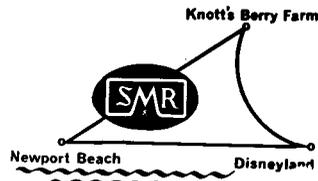
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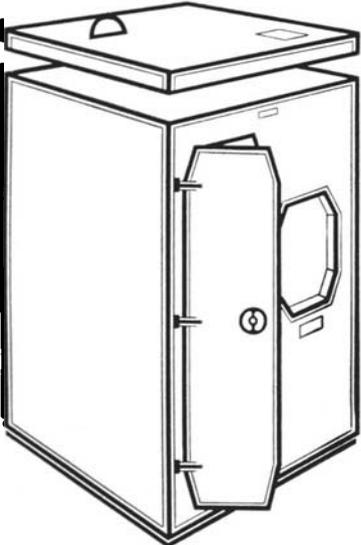


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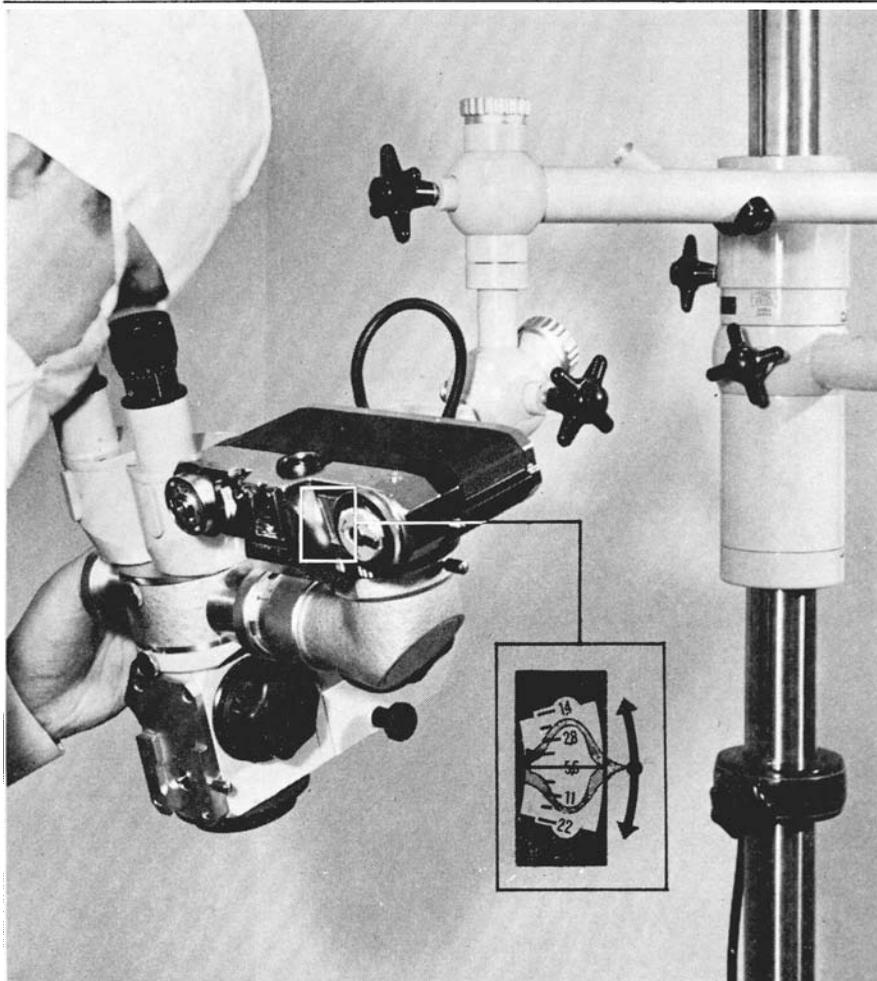
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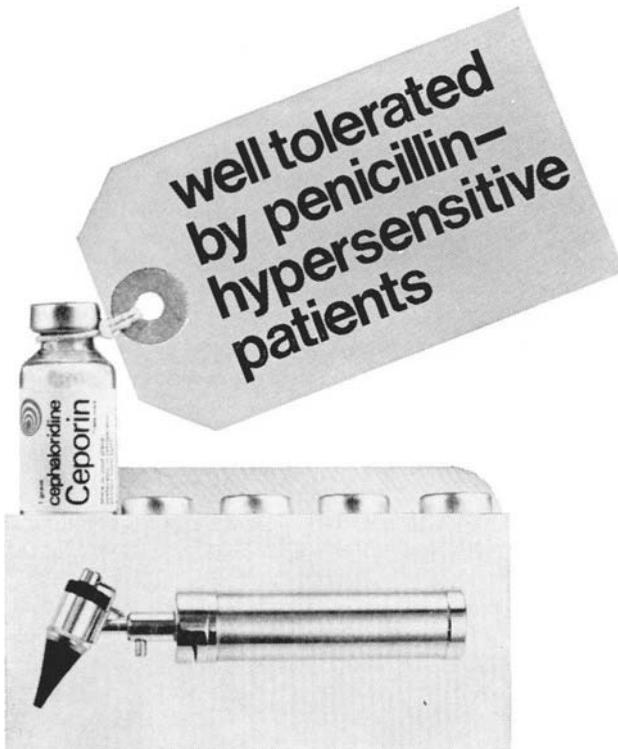
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### **Clinical success**

Ceporin's rapid bactericidal action has a special value in the treatment of chronic ENT infections, especially those caused by penicillin-resistant staphylococci, and in preventing such complications as the development of brain abscesses from otitis media. Ceporin's broad-spectrum activity is particularly useful when mixed infections are encountered – as, for example, in sinusitis.

### **Broad spectrum**

Ceporin is highly active against most gram-positive organisms, including penicillin-resistant staphylococci,<sup>3</sup> and many gram-negative organisms.

### **Bactericidal**

Susceptible organisms are rapidly killed at or near the minimum inhibitory concentration. Thus there is little opportunity for resistance to develop.

### **Well tolerated**

Ceporin is usually well tolerated by penicillin-hypersensitive patients.<sup>1, 2, 4</sup> It has very low toxicity and, in reduced dosage, is safe to use when renal function is impaired.<sup>5</sup> The injections are remarkably painless.

### **References**

1. *Supp. to Postgrad. med. J.* (Aug. 1967) **43**, 141
2. *Brit. J. Clin. pract.* (1967) **21**, 335
3. *Supp. to Postgrad. med. J.* (Aug. 1967) **43**, 67
4. *Lancet* (1967) **2**, 603
5. *Supp. to Postgrad. med. J.* (Aug. 1967) **43**, 89, 92

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**Ceporin cephaloridine**

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**Antibacterial activity**

Ceporin is highly active against *Staphylococcus aureus* including strains which are resistant to penicillin, *Streptococcus pyogenes*, *Streptococcus viridans*, *Diplococcus pneumoniae*, *Corynebacterium diphtheriae*, *Bacillus anthracis*, Clostridia spp. and some strains of *Streptococcus faecalis* (enterococcus). Gram-negative organisms which are sensitive to Ceporin include: *Proteus mirabilis* (the commonest infecting organism of the Proteus species), *Escherichia coli*, *Neisseria meningitidis*, *Neisseria gonorrhoea*, most strains of *Klebsiella pneumoniae*, and many strains of *Haemophilus influenzae*. Ceporin is also active against *Treponema* and *Leptospira* spp. It has no activity clinically against *Pseudomonas aeruginosa* (pyocyanea), *Mycobacterium tuberculosis*, *Brucella abortus*, most strains of *Aerobacter aerogenes*, pathogenic fungi, protozoa or viruses.

Ceporin is highly bactericidal. Like the penicillins it acts principally against actively growing and dividing cells, of which usually more than 99% are killed in two to five hours, at concentrations only slightly higher than the minimum inhibitory concentration. Development of resistance is therefore uncommon. Ceporin is relatively insensitive to staphylococcal penicillinase.

**Indications**

Respiratory tract infections: follicular tonsillitis,

pharyngitis, sinusitis, acute and chronic bronchitis, infected bronchiectasis, bacterial pneumonia and bronchopneumonia, post-operative chest infections, empyema, lung abscess and complicated whooping cough.

Urinary tract infections: acute and chronic pyelonephritis, cystitis, asymptomatic bacteriuria and bacterial prostatitis. Soft-tissue and skin infections: furunculitis, cellulitis, carbuncles, abscesses, erysipelas, infected gangrene, otitis media and mastoiditis, peritonitis and post-traumatic and post-surgical wound infections.

Other infections: septicæmia, whether gram-positive or gram-negative. Endocarditis, both acute and subacute. Meningitis, especially pneumococcal. Gynaecological and obstetrical infections, including septic abortion, uterine infections, endometritis, amnionitis, pelvic abscess, pelvic cellulitis, breast abscess and prophylactically in Caesarean section and prolonged labour. Neo-natal infection, prophylaxis and treatment. Gonorrhoea and syphilis where penicillin is unsuitable due to resistant organisms or allergy. Bone and joint infections, including osteomyelitis and septic arthritis. Intensive care, artificial kidney and peritoneal dialysis units – prophylactically and therapeutically. Prophylactically in open-heart, vascular and genito-urinary surgery. Also in orthopaedic surgery where amputations are undertaken because of inadequate blood supply to limbs.

Dental treatment: patients receiving long-term penicillin prophylaxis against endocarditis require a different antibiotic whilst undergoing dental treatment and Ceporin is well suited for this purpose.

**General dosage and administration**

Ceporin is not absorbed by mouth. It is usually given by intramuscular or deep subcutaneous injection, which is painless and well tolerated. It may also be given intravenously, intrathecally, intrapleurally or intraperitoneally.

**Table 1** General guide to dosage (see also specific dosage recommendations section)

Indications	Adults	Infants and children
Gram-positive infections of a mild or moderate nature* and urinary tract infections	15 to 30 mg/kg/day e.g. 0.5 gram two or three times a day or 1 gram twice a day	15 to 30 mg/kg/day (7 to 14 mg/lb/day) divided into two or three doses
*Acute, simple, soft tissue infections	1 gram once a day is adequate	
Gram-negative or mixed infections (except those of the urinary tract) and severe gram-positive infections	40 to 66 mg/kg/day e.g. 1 gram three times a day or 1.5 grams two or three times a day or 2 grams twice a day	40 to 60 mg/kg/day (18 to 27 mg/lb/day) divided into two or three doses
Infections of exceptional severity (e.g., bacterial endocarditis and septicæmia) and severe, chronic, purulent bronchitis	60 to 100 mg/kg/day e.g. 1.5 to 2 grams three times a day or 1 gram four times a day	60 to 100 mg/kg/day (27 to 45 mg/lb/day) divided into two to four doses
Neo-natal infections therapy		30 mg/kg/day divided into two doses
prophylaxis		30 mg/kg/day as one daily dose

**General guide to dosage in presence of impaired renal function**

If renal function is impaired and the dosage of the drug not reduced, then abnormally high, and possibly toxic, levels of the drug may accumulate in the blood and tissues. The degree of renal functional impairment should be determined (as, for example, by creatinine clearance, serum creatinine and blood urea) and, if possible, blood

levels of the antibiotic should be monitored. Table 2 is an approximate guide to continuation dosage, following a loading dose of 1 gram of Ceporin. Adjustment may be needed for individual patients according to the blood levels of drug achieved, and the dosage reduced if progressively increasing serum levels are found.

(continued overleaf)

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Table 2

Blood urea mg/100 ml	Serum creatinine mg/100 ml	Creatinine clearance ml/min	Recommended maximum dosage of Ceporin grams daily
60 to 100	1.2 to 4	>10	2.0
100 to 200	4 to 6	5 to 10	1.0
> 200	> 6	< 5	0.5

**Side effects and toxicity**

With a dosage of 6 grams or more daily, hyaline casts have appeared temporarily in the urine of some patients, occasionally accompanied by scanty other cellular elements. There have also been rare reports of disturbance of renal function associated with high blood levels of Ceporin. It is important, therefore, when using high doses of the drug (6 grams or more daily) or when renal function is impaired, to avoid abnormally high blood levels of Ceporin. Dosage should be adjusted carefully in patients with severe renal impairment in accordance with blood levels of the drug (see section on dosage recommendations for patients with impaired renal function). As with other antibiotics, Ceporin should be administered with caution to patients with a history of allergy, especially to drugs (including penicillin). Ceporin is usually tolerated well by patients allergic to penicillin, but cross-reaction with penicillin has been encountered rarely. Ceporin occasionally causes hypersensitivity reactions, mostly skin rashes. If this happens the drug should be stopped and not used again in that patient. Very rarely an anaphylactic reaction has developed. In this event the drug should be discontinued immediately and

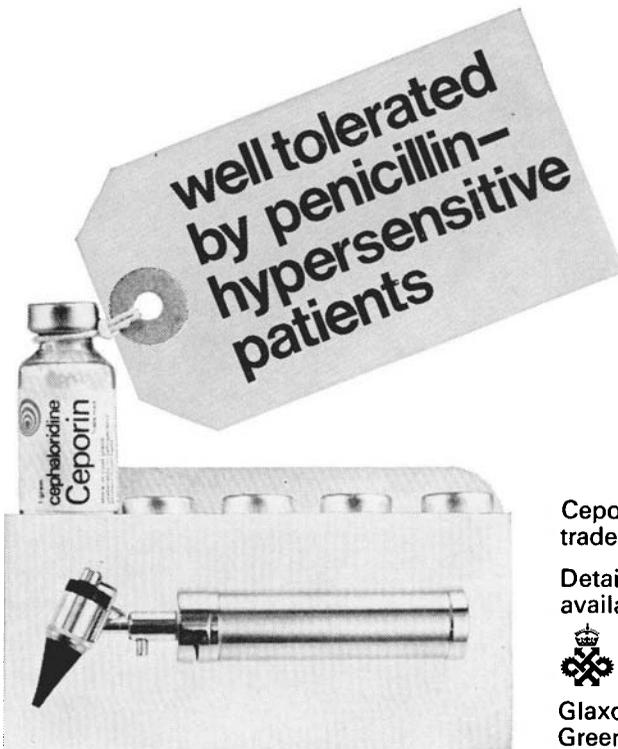
the patient treated at once with the usual agents (adrenaline, antihistamines and an intravenous corticosteroid). A few cases of reversible neutropenia have been reported and a temporary slight rise in serum glutamic-oxaloacetic transaminase has been noted. Reversible nystagmus and signs of cerebral irritation have occurred following intrathecal administration of 100 mg or more, but not when the maximum adult intrathecal dose does not exceed 50 mg. There has been no laboratory or clinical evidence of teratogenicity or embryopathic effects but, as with all drugs, Ceporin should be used with caution in the early months of pregnancy.

**Legal restriction**

To be supplied on prescription only  
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**Presentation**

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## Side-effects

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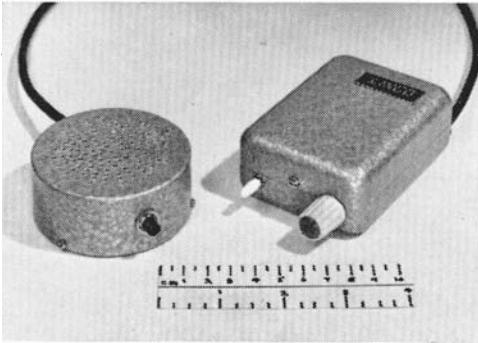
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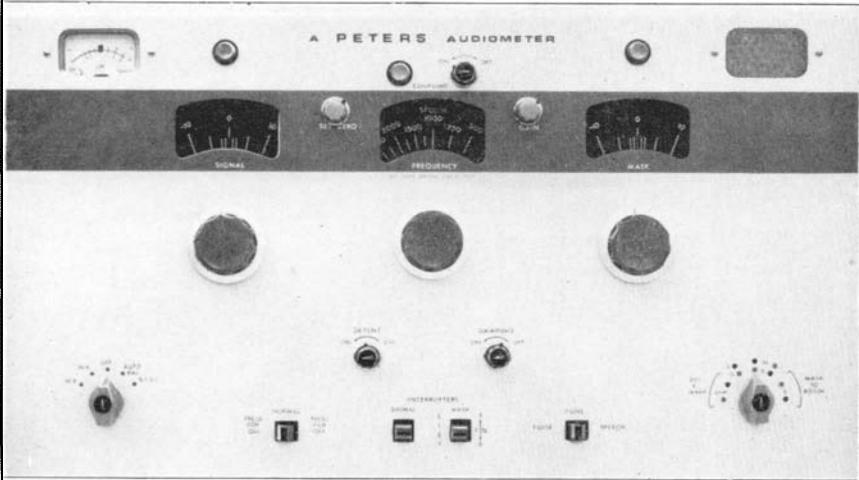
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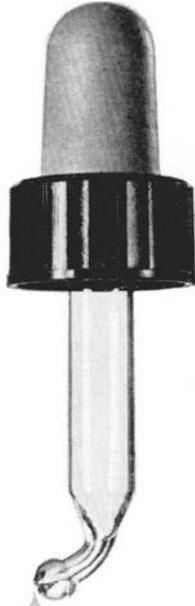
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