



CLINICAL GUIDELINE

Injectational Botulism in Adults

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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Important Note:

The online version of this document is the only version that is maintained. Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

MANAGEMENT OF INJECTIONAL BOTULISM IN ADULTS

Introduction

Botulism is rare, but most commonly associated with injectational drug use in NHSGGC. The guideline refers to **Adult Injectational Botulism only**. Advice around any form of suspected botulism including infant and gastrointestinal can be obtained from Infectious Diseases or microbiology on call.

Clinical presentation

Descending symmetrical paralysis, typically starting with diplopia, dysarthria and ptosis. There is an absence of fever, meningism, confusion, impaired conscious level and sensory signs. Rapid progression to respiratory failure can occur with autonomic dysfunction. Injectational botulism typically occurs following injection of contaminated heroin into muscle or skin, with an incubation period of around 7 days. **Botulism is a clinical diagnosis**, EMG studies can assist, microbiology results may be negative.

Microbiological diagnosis

Testing for botulism takes several days in a reference lab. Treatment should **not** be deferred pending results. Samples should be sent **urgently** to your local microbiology lab following discussion with the microbiologist. Clinical information section must be completed on this referral form. [BRDW0143.07 GBRU L5.pdf](#)

- Serum for botulinum toxin, **at least 10ml**, in gold topped serum gel tube (must be taken before botulinum anti-toxin is given)
- Pus or debrided tissue for culture and PCR in a plain universal container. Do not send swabs of pus.

Antibiotic treatment – kills viable *C. botulinum*

- IV benzylpenicillin 2.4g 6 hourly and IV metronidazole 500mg 8 hourly
- IV Vancomycin (See GG&C vancomycin dose calculator) plus IV metronidazole 500mg 8 hourly, if allergic to penicillin
- Try to **avoid** gentamicin and clindamycin as this may increase neuromuscular blockade
- Seek advice from Infectious Disease or microbiology re duration.

Other antibiotics may be needed to treat co-existing soft tissue infection.

Botulinum Anti-toxin - binds free botulinum toxin.

IV Anti-toxin should be administered **as soon as possible**.

For supplies contact GRI pharmacy or GRI pharmacist on-call via switchboard 0141 211 4000.

The dosing schedule is summarised below but please check product information leaflet.

Emergent Biosolutions: Adult dose – contents of 1 vial after dilution 1:10 in normal saline.

Administer by slow IV infusion, initially 0.5ml/min, doubling the rate if tolerated every 30min to a maximum 2ml/min. Monitor for infusion reactions.

Please note this is an unlicensed medication (ULM).

If further supplies are needed in event of using more than 3 vials then contact the duty doctor at UK HSA: 0208 200 4400.

Debridement - removes source of *C. botulinum*

Any injection sites should be **urgently debrided** to remove the source of further toxin production, **even if** there is no evidence of serious infection.

Critical care review

Respiratory failure can occur rapidly. ITU should be informed of any suspected cases.

Public Health notification

Botulism is a notifiable disease. It should be notified on the basis of clinical suspicion, and notification should not wait for test results. Inform the on-call Public Health consultant on Tel 0141 201 4917- option 3

Out of hours 0141 201 3600

Infection Control

Patients with suspected *C. botulinum* require no special infection control measures.