

**From the Chief Medical Officer**  
Dr Michael McBride



Department of  
**Health, Social Services  
and Public Safety**

[www.dhsspsni.gov.uk](http://www.dhsspsni.gov.uk)

AN ROINN

**Sláinte, Seirbhísí Sóisialta  
agus Sábháilteachta Poiblí**

MÁNNYSTRIE O

**Poustie, Resydènter Heisin  
an Fowk Siccar**

## **URGENT COMMUNICATION**

### **HSS (MD) 39/2008**

All General Practitioners – please ensure this message is seen by all practitioners and non-principals working in your practice and retain a copy in your locum information pack

Medical Directors of Trusts for onward cascade to:

- Staff in A&E Departments
- Staff in Intensive Care Units and HDUs
- Consultants in Infectious Disease
- Consultant Microbiologists
- Consultant Neurologists
- Consultant Pathologists
- Services dealing with drug misuse

Chief Executives of HSS Boards and Trusts

Directors of Public Health

Consultants in Communicable Disease Control Communicable Disease Surveillance Centre (NI)

Drug and Alcohol Co-ordinators

Northlands

NICAS

Dunlewey Substance Advice Centre

Carlisle House.

Opportunity Youth

Contact Youth

**Castle Buildings**

**Stormont Estate**

**Belfast BT4 3SQ**

**Tel: 028 90 520658**

**Fax: 028 90 520574**

**Email:** michael.mcbride@dhsspsni.gov.uk

**Your Ref:**

**Our Ref: HSS(MD)39/2008**

**Date: 28 November 2008**

Dear Colleague

## **CLUSTER OF BOTULISM CASES IN INJECTING DRUG USERS IN DUBLIN**

### **Background**

The Health Protection Surveillance Centre in Dublin have advised that four clinically diagnosed cases of botulism in injecting drug users (IDUs) have been reported since Monday 24<sup>th</sup> November. All appear to have been exposed in the last 7-10 days and all have been admitted to intensive care units for ventilation.

**Botulinum antitoxin is held at the Belfast City Hospital – details are available from the Consultant Bacteriologist on call who can be reached at 028 90 329241. The use of antitoxin should also be discussed with a Consultant Neurologist, if feasible.**

### **Preventive measures**

The risk of death in individuals presenting with wound botulism may be reduced if supportive therapy and antitoxin are provided promptly. Increased awareness amongst clinicians may facilitate prompt diagnosis and treatment. Wound botulism is

thought to occur in IDUs when heroin is contaminated with *C. botulinum* and anaerobic conditions exist at injection sites.

**The following advice may reduce the risk of wound botulism in IDUs:**

- If you must take heroin, smoke it instead of injecting.
- If you must inject, do not inject into muscle or under the skin: make sure you hit the vein - your blood is better at killing bacteria than your muscle.
- Don't share needles, syringes, cookers/spoons or other 'works' with other drug users.
- Use as little citric acid as possible to dissolve the heroin. A lot of citric acid can damage the muscle or the body under the skin, and this damage gives bacteria a better chance to grow.
- If you inject more than one type of drug, inject each at a separate place on your body and with clean works for each injection. This is important because certain drugs (e.g. cocaine) could give bacteria in heroin a better chance to grow.
- If you get swelling, redness, or pain where you have injected yourself, or pus collects under the skin, you should get a doctor to check it out immediately, especially if the infection seems different to others you may have had in the past.

**Further clinical and laboratory advice is attached in the Annex to this letter.**

**Reporting & public health investigation**

Since food borne botulism constitutes a public health emergency, food must be excluded as a source for all cases of botulism. Food samples associated with suspected cases of food borne botulism must be obtained as a matter of extreme urgency in order to prevent further cases. Samples of heroin can be tested by the HPA for the presence of microbial contamination. If the police are in possession of drugs believed to be associated with suspected cases of wound botulism, please contact the HPA FSML on 020 8200 4400 to discuss arrangements for testing. Clinicians and CCDCs are asked to report any suspected cases of botulism to Cathy Grant at the HPA FSML (tel: 020 8327 7110) or Vina Mithani at the HPA (tel: 020 8327 6521).

Suspected cases should be reported to the CDSC (NI) (Tel: 028 90263765)

**Yours sincerely**



**DR MICHAEL McBRIDE**  
**Chief Medical Officer**

cc: Dr Ian McMaster  
Rob Phipps  
Gary Maxwell  
Claire Baxter

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## Clinical guidelines

### Clinical features

The key clinical syndrome produced by botulinum toxin is an afebrile, descending, flaccid paralysis. Patients with botulism typically present with difficulty speaking, seeing and/or swallowing. They may have double vision, blurred vision, drooping eyelids, slurred speech, difficulty swallowing, and muscle weakness. If untreated, paralysis may progress to the arms, legs, trunk and respiratory muscles. There is usually no fever, no loss of sensation and no loss of awareness. There may also be autonomic signs with dry mouth, fixed or dilated pupils, and cardiovascular, gastrointestinal and urinary autonomic dysfunction. If onset is very rapid, there may be no symptoms before sudden respiratory paralysis occurs, which may be fatal. Recovery can take months. **Clinicians should suspect botulism in any patient with an afebrile, descending, flaccid paralysis.**

**Clinical management** Botulinum antitoxin is effective in reducing the severity of symptoms if administered early in the course of the disease. *C. botulinum* is sensitive to benzyl penicillin and metronidazole. In cases of wound infection, antimicrobial therapy and surgical debridement should reduce the organism load and therefore toxin production, but circulating toxin can only be neutralised by the early administration of antitoxin. **Where there is definite clinical suspicion of botulism, treatment with antitoxin should not be delayed for microbiological testing.**

**Botulinum antitoxin is held at the Belfast City Hospital - details are available from the Consultant Bacteriologist on call who can be reached at 028 90 329241. The use of antitoxin should also be discussed with a Consultant Neurologist, if feasible.**

### Laboratory diagnosis

Confirmation of the clinical diagnosis is by the demonstration of botulinum toxin in blood samples or, in the case of wound botulism, by the identification of *C. botulinum* in wound specimens. Routine laboratory tests are not helpful and **specimens should therefore be sent immediately to the reference laboratory.**

### Samples to be taken from acutely ill patients include:

- **Serum.** At least 10ml. Serum samples must be collected before antitoxin is administered.
- **Wound.** Pus. As much as possible in a sterile container. If pus is not available, a swab of the lesion should be taken and put immediately into a transport medium for anaerobic culture.
- **Biopsy tissues.** If surgical debridement is performed, biopsy tissues should be placed immediately into a sterile container.
- **Post mortem specimens.** Heart blood (10ml), if not haemolysed, should be sent for serum for serum collection. Specimens from infected wounds may also be useful.

All samples must be kept **refrigerated** after collection.

All specimens should be sent directly to the reference laboratory with the sender's name and address clearly marked. The reference laboratory should be telephoned prior to sending the sample.

### **Causative organism**

The symptoms of botulism are caused by a toxin produced by the anaerobic spore forming bacterium *Clostridium botulinum*. The toxin blocks the release of acetylcholine at the neuromuscular junction resulting in a descending flaccid paralysis. Botulism is not spread from one person to another. There are three naturally occurring forms of botulism:

- Food-borne botulism, caused by ingestion of pre-formed toxin.
- Wound botulism, which occurs when *C. botulinum* spores contaminate a wound, germinate and produce toxin in vivo.
- Intestinal colonisation botulism, usually seen in infants, caused by growth of *C. botulinum* and production of toxin in vivo.

### **Reference laboratory for botulinum toxin testing:**

Dr Cathy Grant or Mrs Vina Mithani  
Food Safety Microbiology Laboratory  
Health Protection Agency  
61 Colindale Avenue  
London NW9 5HT  
Tel: (+44) 020 8200 4400 (ask for duty doctor)