** **

**CASE REPORT FORM**

**On individuals diagnosed with non-tuberculous Mycobacterium infection on or after 1st January 2007 and who underwent surgery necessitating use of cardiopulmonary bypass in the preceding 5 years**

Questions highlighted in grey are essential information that should be completed initially for all cases (initial report) meeting the case definition (provided on the final page of this form)

Questions not highlighted are additional information that can be reported following detailed review of clinical notes (update report). Please **keep** this report in the patient’s notes and inform HPSC that you have a case meeting case definition (myco.chim@hpsc.ie). HPSC staff will then take this information by confidential telephone interview.

**Initial report** □ **Update report** □

1. **Reporter**

|  |  |
| --- | --- |
| **1.1 Name** |  |
| **1.2 Job title** |  |
| **1.2 Organisation** |  |
| **1.3 Phone number** |  |
| **1.4 Email address** |  |
| **1.5 Date completed**  | (dd/mm/yyyy) |

1. **Patient Details**

|  |  |  |  |
| --- | --- | --- | --- |
| **2.1 First name** |  | **2.2 Surname** |  |
| **2.3 Date of birth**  | (dd/mm/yyyy) | **2.4** **Age** (at time of dx of mycobacterial infection) |  |
| **2.4 Sex** | **Male** □ **Female** □ |
| **2.5 Last known address** |  |

**3. Organisation Details**

|  |  |
| --- | --- |
| **3.1 Hospital where mycobacterial infection diagnosed** |  |
| **3.2 Medical record number of patient in hospital where mycobacterial infection diagnosed** |  |
| **3.3 Clinician in charge of care when mycobacterial infection diagnosed** |  |
| **3.4 Microbiologist/ ID Physician contact** |  |
| **3.5 Infection Control Team contact** |  |
| **3.6 Date of last admission** (irrespective of reason for admission) |  |
| **3.7 Clinician in charge of care during last admission** |  |
| **3.8 Hospital where cardiac surgery performed** (if different from 3.1 above) |  |
| **3.9 Medical record number of patient in hospital where surgery performed** (if different from 3.2 above) |  |
| **3.10 Contact at hospital where cardiac surgery performed** |  |

1. **Clinical Details**

|  |  |  |  |
| --- | --- | --- | --- |
| **4.1 Clinical presentation of mycobacterial infection** | **Endocarditis** □**Disseminated infection** □**Blood stream infection** □**Graft infection** □ **Prosthesis infection** □**Skin or soft tissue infection** □**Osteomyelitis** □**Not clinically significant** □**Other** □**If other, please specify:** | **4.2 Organism identified** | ***Mycobaterium chimaera*** □***Mycobacterium intracellulare*** □***Mycobacterium* avium complex** □***Mycobacterium* sp.** □ |
| **4.3 Date of presentation with clinical symptoms relating to mycobacterial infection** | (dd/mm/yyyy) |
| **4.4 Did the patient have any significant co-morbidities or immunosuppression at time of presentation?** | **Yes**  □ **No** □If yes, please provide further details below**Significant co-morbidities:****Immunosuppression:** |
| **4.5 Was further surgery required?**  | **Yes**  □ **No** □If yes, please provide further details below**Number of subsequent surgeries:****Dates of subsequent surgeries:****Type of subsequent surgery:** |
| **4.6 Details of management of infection (including antibiotics given and length of treatment)** |  |
| **4.7 Outcome** | **Still ill** □ **Recovered**  □ **Died**  □ If the patient has died, please further details below**Date of death** (dd/mm/yyyy):**Was death attributable to mycobacterial infection?** **Yes**  □ **No** □ |

1. **Laboratory Results**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Date of specimen** | **Type of specimen** (e.g. blood, pus, tissue biopsy, implanted prosthetic material etc.) | **Organism identified** | **Laboratory diagnosis date** | **Type of test carried out to characterise the organism** | **Laboratory type** |
| **5.1** |  |  |  |  | WGS\*\* □16S □Line probe assay □Phenotypic □ | Local lab □Reference lab □Other □ |
| **5.2** |  |  |  |  | WGS\*\* □16S □Line probe assay □Phenotypic □ | Local lab □Reference lab □Other □ |
| **5.3** |  |  |  |  | WGS\*\* □16S □Line probe assay □Phenotypic □ | Local lab □Reference lab □Other □ |
| **5.4** |  |  |  |  | WGS\*\* □16S □Line probe assay □Phenotypic □ | Local lab □Reference lab □Other □ |
| **5.5** |  |  |  |  | WGS\*\* □16S □Line probe assay □Phenotypic □ | Local lab □Reference lab □Other □ |
| **5.6** |  |  |  |  | WGS\*\* □16S □Line probe assay □Phenotypic □ | Local lab □Reference lab □Other □ |

\*\*WGS: whole genome sequencing

1. **Cardiac Surgery**

|  |  |
| --- | --- |
| **6.1 Has this patient had more than one open cardiac surgery procedure in the ten years prior to their mycobacterial infection?** | **Yes** □ **No** □If yes, please give dates of each surgery and provide further details for each PROCEDURE: |

|  |  |
| --- | --- |
| **6.2.1 Date of first cardiac surgery procedure** |  |
| **6.2.2 Hospital** |  |
| **6.2.3 Name of Surgeon** |  |
| **6.2.4 Type of theatre surgery carried out in** | **Conventional theatre** □**Ultraclean ventilated** □**Other**  □ |
| **6.2.5 Procedures undertaken** |  |
| **6.2.6 Reason for surgery** (i.e. underlying condition) |  |
| **6.2.7 Was this a revision procedure?** | **Yes**  □ **No** □ |
| **6.2.8 Was this an emergency procedure?** | **Yes**  □ **No** □ |
| **6.2.9 ASA score at time of surgery** |  **I** □ **II** □ **III** □ **IV** □ **V** □ |
| **6.2.10 Antimicrobial prophylaxis used** |  |
| **6.2.11 Length of surgery**  |  |
| **6.2.12 Was there delayed closure of the sternal wound?** | **Yes**  □ **No** □ |
| **6.2.13 Was an implant used?** | **Yes**  □ **No** □ |
| **6.2.14 Type of implant used** |  |
| **6.2.15 Cardiopulmonary bypass used?** | **Yes**  □ **No** □ |
| **6.2.16 Make of bypass machine used** |  |
| **6.2.17 Further details of bypass machine used (e.g., model)** |  |
| **6.2.18 Length of time on bypass?**  |  |
| **6.2.19 Date of purchase of bypass machine used in the procedure** |  |
| **6.2.20 Is the same bypass machine in use currently?** | **Yes** □ **No** □If no, when was it replaced?  |
| **6.2.21 If yes, was bypass machine contaminated with same species** (Yes/No) |  |

|  |  |
| --- | --- |
| **6.3.1 Date of subsequent cardiac surgery procedure** |  |
| **6.3.2 Hospital** |  |
| **6.3.3 Name of Surgeon** |  |
| **6.3.4 Type of theatre surgery carried out in** | **Conventional theatre** □**Ultraclean ventilated** □**Other**  □ |
| **6.3.5 Procedures undertaken** |  |
| **6.3.6 Reason for surgery** (i.e. underlying condition) |  |
| **6.3.7 Was this a revision procedure?** | **Yes**  □ **No** □ |
| **6.3.8 Was this an emergency procedure?** | **Yes**  □ **No** □ |
| **6.3.9 ASA score at time of surgery** | **I** □ **II** □ **III** □ **IV** □ **V** □ |
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| **6.3.20 Is the same bypass machine in use currently?** | **Yes** □ **No** □If no, when was it replaced?  |
| **6.3.21 If yes, was bypass machine contaminated with same species** (Yes/No) |  |

|  |  |
| --- | --- |
| **6.4 What are routine decontamination processes for bypass machines locally?** |  |
| **6.5 Any existing concerns or infection control issues around bypass machines locally?** |  |
| **6.6 Additional information** |  |

**7. Case classification**

|  |  |
| --- | --- |
| **7.1 Classification** | **Confirmed** □ **Probable** □ |

**PLEASE NOTE:**

Questions highlighted in grey are essential information that should be completed initially for all cases.

Questions not highlighted are additional information that can be reported following detailed review of clinical notes.

Please continue on a separate sheet if there are additional laboratory specimens or surgical procedures.

**This case report form is based on the one developed by Public Health England with some slight modifications.**

**Case definition (EU definition)**

**Clinical criteria:**

Any of the following:

* Prosthetic valve endocarditis[[1]](#footnote-1)
* Prosthetic vascular graft infection
* Sternotomy wound infection
* Mediastinitis
* Manifestations of disseminated infection including embolic and immunologic manifestations e.g. splenomegaly, arthritis, osteomyelitis, bone marrow involvement with cytopenia, chorioretinitis, lung involvement, hepatitis, nephritis, myocarditis

**Exposure criteria:**

A patient having undergone surgery requiring cardiopulmonary bypass in the 5 years prior to the onset of symptoms of infection

**Confirmed case:**

A patient meeting both the clinical and exposure criteria

**AND**

*M. chimaera* detected by culture and identified by DNA sequencing in an invasive sample (blood, pus, tissue biopsy or implanted prosthetic material).

**Probable case:**

A patient meeting the clinical and exposure criteria

**AND**

*M. chimaera* detected by direct PCR and amplified DNA sequencing from an invasive sample (blood, pus, tissue biopsy or implanted prosthetic material)

**OR**

MAC detected by culture or direct PCR from an invasive sample (blood, pus, tissue biopsy or implanted prosthetic material)

 **OR**

Histopathological detection of non-caseating granuloma and foamy/swollen macrophages with acid fast bacilli in cardiac or vascular tissue in the proximity of the prosthetic material or in specimen from the sternotomy wound.

1. As evidenced by echocardiography (vegetations, new or partial dehiscence of a prosthetic valve, pseudo-aneurysm or an abscess in the tissues surrounding a heart valve) [↑](#footnote-ref-1)