

Endocarditis Patient Referral to Region Wide MDT - Standard Operating procedure

Introduction

The aim is to outline the process for the referral arrangements to the Regional Endocarditis MDT within the Cheshire & Merseyside STP, North Wales and Isle of Man.

Summary

The referral process into LHCH for patients with clear indications for in-house surgery will be via the electronic referral system. These will be allocated by the Surgeon of the Week (SOW) into urgent slots. These patients will however be identified and registered and then screened for discussion at the MDT if required. For other patients in the region simply requiring “elective” discussion at the MDT, registration, advice and contact will be via Steve Akrigg for listing at MDT. Emergencies will be via the on-call cardiac or aortic surgeon as normal. Surgeons giving on-call advice will request referral into MDT via Steve Akrigg to Steven.Akrigg@lhch.nhs.uk or themselves refer in. For patients not requiring immediate surgery, but continued medical management, they will be handed over from Surgeon of the week (SOW) on a week to week basis ensuring continuity and will be kept under surveillance until the final plan has been determined. Infected pacing systems will be sign posted to On-call EP Cardiologist and registered for the MDT and discussion if required.

A “Tracking Form” will be used internally which will automatically generate an e-mail to the Endocarditis Coordinator and create a searchable audit trail. All correspondence, including “transfer notification” e-mails will be copied to Surgeon of Week, On-call EP Cardiologist and Endocarditis Coordinator.

A database of all referrals will be maintained by the Endocarditis Coordinator.

Objectives:

- 1) Register cases transferred into LHCH within last 7 days or already accepted and allocated, and offer advice where indicated.
- 2) Register and discuss complex cases from regional MDTs requiring advice.
- 3) Provide data and audit to improve services and outcomes.
- 4) Facilitate learning and education.

External referrals to LHCH

Valvular endocarditis and infectious aortitis/mycotic aneurysms

a) Patients requiring emergency surgery

Patients who are critically unwell and require surgery within 24 hours should be referred via phone call to the Surgeon of the Week (SOW) during working hours (Monday to Friday; 0800-1700) or to the on-call cardiac surgeon out of hours. Should the pathology involve proximal aortic root with abscess, mycotic arch/thoracoabdominal aorta or infected graft/stent, the on-call Aortic Surgeon should be contacted for that 24 hour period. In the event the consultant cannot be contacted, the on-call Surgical SpR should be contacted. Once accepted a critical bed should be secured (Intensivist and ITU Leader) and transfer arranged through the Hospital Coordinators. The "Tracking Form" generated and sent to the responsible consultant should be copied to the Endocarditis Coordinator. The case will be registered at the weekly MDT. The Microbiologist should be informed of the case via e-mail by the Consultant or Endocarditis Coordinator.

b) Patients requiring urgent in-house surgery

Patients requiring in-house surgery should be referred into the LHCH hub using the existing system for urgent referrals through the Hospital Coordinator ensuring the appropriate boxes are ticked indicating endocarditis. The referral will be forwarded to the Surgeon of the Week for action as well as the Endocarditis Coordinator to be registered at the weekly MDT. The Surgeon of the Week will allocate to a surgeon and a theatre slot depending on the pathology. Cases involving root abscess, infectious aortitis, mycotic arch/TAAA or infected graft/stent will be directed to the Aortic Surgeon on-call and the Endocarditis Coordinator for registration at the MDT. Particular nuances in the timing of surgery and further imaging will be managed by the allocated surgeon and Microbiology and Cardiology.

Other scenarios

Calls for advice to on-call surgeon

New system requests for advice will:

- 1) Go through regional MDTs and be listed for discussion at the weekly LHCH MDT (See MDT Process).
- 2) Be directed to the Endocarditis Coordinator directly to be listed for discussion at the weekly MDT.
- 3) Phone calls made to surgeons directly for advice, where there is a plan for continued medical management, should elicit a request for an e-mail to the Endocarditis Coordinator and discussion at the weekly MDT. The SOW will remain in charge via MDT discussions and for continuity of advice and surgery if indicated.

Referrals to LHCH MDT should take place as early as possible.

Infected Pacing Systems

a) Emergency/Urgent referrals

Referrals with a clear indication for device extraction (Either Laser or on CPB) should go through the on-call EP Cardiologist, via the Cardiology Urgent Referral System and Hospital Coordinators. Cases will be then be distributed to Dr Rao/Dr Wright depending on necessary timing and scheduling. The Endocarditis/Pacing Infection boxes on the referral system should be ticked allowing patients to be picked up by the Endocarditis Coordinator who will register at the weekly MDT. Notification of transfer e-mails will also be copied to the Endocarditis Coordinator.

b) Referral for advice

Doctors wanting advice may:

- I. Refer into Endocarditis MDT at 0815 on a Friday morning via e-mail to Endocarditis Coordinator.
Steven.Akrigg@lhch.nhs.uk
- II. Contact the on-call EP Cardiologist who will offer an opinion and request a referral into the MDT.

Within LHCH

Valvular endocarditis and infectious aortitis/mycotic aneurysms

Patients within LHCH should follow the same pathway as those described above for external patients. However, often due to proximity and familiarity, referrals may take place between physicians. All such patients should at the very least be registered with the Endocarditis Coordinator to be registered with the MDT.

Pacing related endocarditis

Patients within LHCH should follow the same pathway as those described above for external patients. However, often due to proximity and familiarity referrals may take place between physicians. All such patients should at the very least be registered with the Endocarditis Coordinator to be registered with the MDT.

Referral to MDT

To register patients for discussion at the weekly LHCH MDT the Endocarditis Coordinator should be e-mailed no later than Wednesday prior to the MDT taking place with the following information:

- a) Brief History with dates
- b) Echo images
- c) CT images
- d) Blood results

A database of all referrals will be maintained by the Endocarditis Coordinator.

Frequency of MDT

The MDT will be held every Friday morning starting 08.15. It is expected that the referrer will present the case at the MDT either personally or via teleconferencing.

To access the teleconferencing details please dial 0151 254 3053.

Attendance at MDT

Referring Cardiologist

Imaging

Microbiologist

Format

In Phase One involving Aintree University Hospital, Warrington Hospital and LHCH the format will be:

- 1) MDT list distributed Thursday evening by Endocarditis Coordinator requesting imaging be made available to all three centres.
- 2) Friday 0815 start MDT.
- 3) MDT start: Brief statement on total number of cases registered in previous week stating number requiring discussion to allow meeting to be managed accordingly.
- 4) Audio conference call between three centres.
- 5) Three centres to access imaging on their own systems during discussion.
- 6) Ideally Consultant who has seen patient should present.
- 7) Documentation outcomes:
 - a. Dictation letter and distribution
 - b. Endocarditis MDT Work List
 - c. EPR MDT Document
- 8) Where necessary information should be fed back to SOW, EP Team or Other referring team.

Palliation

Patients transferred in for assessment and deemed unsuitable for surgical intervention should be referred onto Palliative Care Service either within LHCH or at base hospital. This outcome will be registered by the Endocarditis Coordinator and MDT. The MDT will discuss the efficacy of palliative long term oral or IV antibiotics.

High Risk MDT

Cases where the decision to operate is equivocal will be discussed at the High Risk MDT and the case may require "consultant double scrubbing".

Repatriation

Operated patients with no surgical issues outstanding should be transferred back to base hospital to plan long term home IVT, monitoring and follow-up.

GP and Outpatient IVT

Communication with the patients GP and Outpatient IVT is vital prior to discharge and may include instructions for regular CRP monitoring. Follow-up arrangements at LHCH for bloods, imaging and duration of IVT are critical to long term outcomes.

Follow-up

Long term follow-up is vital to ensuring long term outcomes and robust plans should be in place for clinical assessment, imaging and antibiotics.

The Endocarditis MDT Core Team

Trust	Member	Discipline
Liverpool Heart & Chest Hospital (LHCH)	Mr Mark Field (Clinical lead for Aortic Surgery) Mr Manoj Kuduvali (Associate Medical Director) Dr Jay Wright Dr Archie Rao Dr Carlos Nistal De Paz Dr Alessandro Gerada Dr Jaspal Dua Dr Tim Fairburn Mr Bil Kirmani	Cardiac & Aortovascular Surgeon Cardiac & Aortovascular Surgeon Devices and Heart Failure Cardiologist Devices and Heart Failure Cardiologist Microbiologist Microbiologist ACHD Cardiologist Imaging Cardiologist Cardiac and Mitral Surgeon
Aintree	Dr Malcolm Burgess Dr Som Chuah TBA	Cardiologist Cardiologist Microbiologist
Warrington	Dr Serge Osula Dr Pradeep Magapu Dr Chin Toong	Cardiologist Cardiologist Microbiologist
Royal Liverpool University Hospital (RLUH)	Dr Jason Pyatt TBA	Cardiologist Microbiologist
Countess of Chester Hospital (COC)	Dr Martin Sedgwick TBA	Cardiologist Microbiologist
Arrowe Park Hospital	Dr Nick Newall TBA	Cardiologist Microbiologist
Whiston Hospital	Dr Mohammad Abdula TBA	Cardiologist Microbiologist
Southport Hospital	Dr Peter Mennim TBA	Cardiologist Microbiologist
North Wales	Dr Richard Cowell TBA	Cardiologist Microbiologist
Nobles Hospital, Isle of Man	TBA TBA	Cardiologist Microbiologist