UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Cardiac Surgery

2627-4-H4102D024-H4102D085M

Aims

This course aims to provide the tools and the necessary knowledge for the students to perform a correct clinical diagnosis of the various cardiothoracic diseases with indication for a cardiac surgery operation. The student will learn how to ideantify the proper surgical indication and surgical procedure.

Contents

Extracorporeal circulation, myocardial protection and principles of circulatory arrest techniques. Valvulopathies with surgical indication. Thoracic aortic diseases. Ischaemic heart disease and mechanical complications of myocardial infarction. Endocarditis. Principles of congenital heart disease. Heart failure, mechanical circulatory support and heart transplantation.

Detailed program

1.Extracorporeal circulation, myocardial protection and circulatory arrest.
Principles of extracorporeal circulation and perfusion techniques, myocardial and cerebral protection.

2.Valvular diseases with surgical indication.
Pathophysiology, clinical presentation and indication for the surgical treatment of main valvulopathies. Description of surgical technique for the treatment of mitral, tricuspid and aortic valvular diseases. Presentation of minimally invasive or trans-catheter approaches and future developments.

3. Thoracic aortic diseases.
   Pathophysiology, clinical presentation and indication for the surgical treatment of main thoracic aorta

diseases with surgical indication. Description of surgical technique for the treatment of main thoracic aortic diseases.

4. Ischaemic heart disease.
   Pathophysiology, clinical presentation and surgical treatment of ischaemic heart diseases, including mechanical complications of myocardial infarction. Description of surgical myocardial revascularisation techniques.

5. Congenital heart disease.
   Presentation of the most frequent clinical pictures of congenital heart diseases and main surgical techniques for their treatment.

6. Endocarditis
   Presentation of the clinical picture and indications to surgery

7.Heart failure, mechanical circulatory support and heart transplantation
Clinical presentation of acute and chronic heart failure, conventional surgical techniques, areas of application of mechanical circulatory support systems and indications for heart transplantation.

Integration of Gender-Specific Medicine, to integrate sex-specific variables into the tailoring of cardiac surgery strategies, in order to optimize clinical outcomes and overcome gender bias in patient care.

Prerequisites

Knowledge of the preparatory courses as indicated in the regulations of the degree course in Medicine and Surgery.

Teaching form

Frontal lessons and clinical attachment periods. Teaching language: English

Textbook and teaching resource

L. Chiariello Trattato di Chirurgia Cardiaca, SEU
F. Minni. Chirurgia Generale. Zanichelli
F. D'Amico. Manuale di Chirurgia Generale. Piccin

Semester

4th year, first semester

Assessment method

Written test consisting of closed-ended questions, part of an integrated Cardiovasular track

Office hours

Only by appointment by e-mail

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING