

2022 Akita University Faculty of Medicine Syllabus

Category	: 臨床医学 VII (CC2)
Course Title	: Clinical Clerkship II Cardiovascular surgery
Eligible Students	: grade 6 Elective Course
Code	: 71644006-10

1. Lead Instructor

Hiroshi Yamamoto (Professor, Cardiovascular surgery, 6135, Office Hour: 8:00-17:30)

2. Instructors

Hiroshi Yamamoto (Professor, Cardiovascular surgery, 6135, Office Hour: 8:00-17:30)

Takayuki Kadohama (Associate Professor, Cardiovascular surgery, 6135, Office Hour: 8:00-17:30)

Genbu Yamaura (Assistant Professor, Cardiovascular surgery, 6135, Office Hour: 8:00-17:30)

Daichi Takagi (Assistant Professor, Cardiovascular surgery, 6135, Office Hour: 8:00-17:30)

Kentaro Kiryuu (Medical Doctor, Cardiovascular surgery, 6135, Office Hour: 8:15-17:30)

Fuminobu Tanaka (Medical Doctor, Cardiovascular surgery, 6135)

Yoshinori Itagaki (Medical Doctor, Cardiovascular surgery, 6135)

3. Course Description Outline(Course Objectives)

1. ねらい

チームの一員として、手術や入院患者さんへの診療を通して、将来どの分野の医師にも必要な外科領域、特に心臓血管外科を中心とした症候や病態の臨床推論、鑑別診断、検査・治療方針決定などの実践力を習得する。また、関連する医学行動科学、医療倫理、医療安全、医療法（医療制度）、EBM について実践的に学ぶ。

1. Outline and aims

As members of our teams, students will acquire practical skills in clinical reasoning, differential diagnosis, and decision making for examination and treatment of syndromes and pathological conditions in the field of surgery, especially cardiovascular surgery, which are necessary for future physicians in any field.

In addition, students will learn about medical behavioral science, medical ethics, medical safety, medical law (medical system), and EBM.

2. 概要

CC2 ではより本格的な心臓血管外科の診療参加型臨床実習を行う。医師 3-4 名からなる診療チームに所属し、チームの受け持ち患者全てを担当する。医師の指導の下、日々の回診、カルテへの記載、プレゼンテーションなどを行う。特に、手術症例は主体的に担当し、術前検査、カンファレンスペーパーの作成、術前プレゼンテーション、手術、術後管理など、実際の診療に参加しながら、臨床推論・治療の過程を実践的に学ぶ。

1) 病棟診療

各学生は、各診療チームに 1 週間配属され、指導医のもと 1 名の病棟（主に集中治療室）の術後患者さんを担当する。指導医の指導の下に、日々、担当患者さんの回診を行い、医療面接・身体診察による課題抽出、臨床推論、診療内容のカルテへの記載を通して、チームの一員として基本的な診療を実践的に学ぶ。

特に、術後患者の診療を通して、心臓血管外科術後急性期の呼吸・循環のダイナミクスを学ぶ。

2) 外来診療、各種検査、手術などの治療への参加

実習班で一人の手術患者を担当する。術前検査、手術適応・術式判断、手術見学、術後管理について、診療チームの一員として、実践的に学ぶ。

2. Outline

• Students should work actively as members of a medical team led by a supervisor, and acquire basic knowledge and skills in cardiovascular surgery.

• Students will be trained to collect information, identify and interpret problems (clinical reasoning), and formulate solutions (diagnosis and treatment).

(1) Clinical clerkship in a ward

Students will be assigned to a medical team for one week and are responsible for one postoperative patient in a ward (mainly in intensive care units) under the supervision of a medical advisor.

Under the guidance of the supervising physician, the students make daily rounds of the patients, and learn basic medical treatment by identifying problems through medical interviews and physical examinations, clinical reasoning, and the contents of medical treatment in the medical record. In particular, students will learn the dynamics of respiration and circulation in the acute phase after cardiovascular surgery by treating postoperative patients.

(2) Participation in outpatient care, various examinations, and treatment such as surgery

Each practice group will be in charge of one surgical patient. Students will learn preoperative examinations, surgical indications and procedures, surgical observation, and postoperative management as members of a medical team.

3. 学修目標

上記の概要・ねらいを中心に実習を進めるが、本診療科で特に経験する症候・病態，各種手技などの内容を下記に示す。

1) 症候・病態 臨床推論

(1) 術後循環不全・術後呼吸不全 (2) ショック (3) 浮腫 (4) 胸水 (5) 胸痛 (6) 呼吸困難 (7) 動悸

2) 基本的臨床手技

(1) 皮膚消毒ができる

(2) 中心静脈カテーテル挿入を見学，介助を通して，中心的役割を担えるようになる。

(3) 動脈ラインより動脈血を採取し，測定し，臨床推論を行う。

(4) 診療録（カルテ）およびカンファレンスペーパーを作成する。

3) 検査手技

(1) 12誘導心電図を記録できる

(2) 血液ガス分析を行える

4) 外科手技

(1) 無菌操作を実施できる

(2) 手術や手技のための手洗いができる

(3) 手術室におけるガウンテクニックができる

(4) 創の消毒やガーゼ交換ができる

(5) 手術，術前・術中・術後管理を見学し，介助する

5) 医療行動学，医療倫理，医療安全，医療法，EBM について

(1) 各種検査・治療のインフォームドコンセント：手術のインフォームドコンセントに参加する。医師の指導のもと，CT等の同意書を患者さん・ご家族から取得する

3. Learning objectives

In addition to the above outlines and aims, the following is a list of syndromes, conditions, and procedures that are particularly important in this department.

1) Symptoms and conditions. Clinical reasoning

(1) Postoperative circulatory and respiratory failures (2) Shock (3) Edema (4) Pleural effusion (5) Chest pain (6) Dyspnea (7) Palpitation

2) Basic clinical procedures

(1) Skin disinfection

(2) Training central venous catheter insertion through observation and assistance.

(3) Collecting arterial blood from the arterial line, performing blood test, and making clinical inferences.

- (4) Preparing medical records and conference papers.
- 3) Examination procedures
 - (1) Recording a 12-lead electrocardiogram.
 - (2) Performing blood gas analysis.
- 4) Surgical techniques
 - (1) Performing aseptic manipulation
 - (2) Washing hands (hand scrubbing) for surgery and procedures
 - (3) Performing gown techniques in the operating room
 - (4) Disinfecting the wounds and changing gauzes
 - (5) Observing surgery (as an assistant). Pre-operative management
- 5) Medical behavior, medical ethics, medical safety, medical law, and EBM
 - (1) Informed consents for various examinations and treatments: Participating in the informed consent procedure for surgery.
 - (2) Obtaining consent forms for CT and other procedures from patients and their families under a supervisor.

本科目は実務経験のある教員による授業科目です。

This subject is a lesson subject by a teacher with practical experience.

4. Textbook/Reference Books

心臓手術の周術期管理 (メディカル・サイエンス・インターナショナル)
日本循環器学会ガイドライン

Robert M Bojar. Manual of perioperative care in adult cardiac surgery, 5th Ed. Wiley-Blackwell
Japan Circulation Society (JCS) Guidelines

5. Assessment

- (1) 術前・術後プレゼンテーションを通して疾患・手術に関する知識・理解を評価する
- (2) 受け持ち患者の診察・カルテ記載のチェックを毎日行い、評価する

Evaluating the student's ability understanding of the knowledge regarding diseases and surgical procedures through

- 1) a student's presentation ability in a preoperative conference,
- 2) daily checking of patient's examinations and medical records.

6. Out of Class Study/Message

希望により当直医とともに心臓大血管手術後の術後管理を見学することができる
経験記録手帳の記載を行うこと

In this course, students, if they wish, will be able to join postoperative management with on-duty doctors as an out of class study.

Students should record logbook of the clinical clerkship.

心臓血管外科学 臨床実習

Schedule		Contents of Class
1	Mon [8:00-17:00] Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference (Conference room of cardiovascular surgery department) 09:00 Orientation 10:00 ~ Observing surgery, Patient examination, Making medical records
2	Tue [8:00-17:00] Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference 10:00 ~ Patient examination, Making medical records 13:00 ~ 16:00 Preparing for a presentation about a preoperative patient. 16:00 Evening conference
3	Wed [8:00-17:00] Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 ICU round 08:30 Morning conference 10:00 ~ Patient examination, Making medical records 13:00 ~ 17:00 Preparing for a presentation about a preoperative patient.
4	Thu [8:00-17:00] Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 ICU round 08:15 Morning conference 10:00 ~ Observing surgery, Patient examination, Making medical records
5	Fri [8:00-17:00] Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference 10:00 ~ Observing surgery, Patient examination, Making medical records
6	Mon [8:00-17:00] Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference (Conference room of cardiovascular surgery department) 10:00 ~ Observing surgery, Patient examination, Making medical records
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9	Thu [8:00-17:00] Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 ICU round 08:15 Morning conference 10:00 ~ Observing surgery, Patient examination, Making medical records
10	Fri [8:00-17:00] Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference 10:00 ~ Observing surgery, Patient examination, Making medical records
11	Mon [8:00-17:00] Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference (Conference room of cardiovascular surgery department) 10:00 ~ Observing surgery, Patient examination, Making medical records
12	Tue [8:00-17:00] Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference 10:00 ~ Patient examination, Making medical records 13:00 ~ 16:00 Preparing for a presentation about a preoperative patient. 16:00 Evening conference

心臓血管外科学 臨床実習

Schedule		Contents of Class
13	Wed [8:00-17:00] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 ICU round 08:30 Morning conference 10:00 ~ Patient examination, Making medical records 13:00 ~ 17:00 Preparing for a presentation about a preoperative patient.
14	Thu [8:00-17:00] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 ICU round 08:15 Morning conference 10:00 ~ Observing surgery, Patient examination, Making medical records
15	Fri [8:00-17:00] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference 10:00 ~ Observing surgery, Patient examination, Making medical records
16	Mon [8:00-17:00] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference (Conference room of cardiovascular surgery department) 10:00 ~ Observing surgery, Patient examination, Making medical records
17	Tue [8:00-17:00] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference 10:00 ~ Patient examination, Making medical records 13:00 ~ 16:00 Preparing for a presentation about a preoperative patient. 16:00 Evening conference
18	Wed [8:00-17:00] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 ICU round 08:30 Morning conference 10:00 ~ Patient examination, Making medical records 13:00 ~ 17:00 Preparing for a presentation about a preoperative patient.
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