

2022 Akita University Faculty of Medicine Syllabus

Category	: 臨床医学アドバンスコース
Course Title	: Cardiovascular surgery - Analysis of Aortic Dissection -
Eligible Students	: grade 4 Elective Course
Code	: 71604003
Schedule	: week 13
Credits	: 0.5

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

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

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

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

3. Course Description Outline(Course Objectives)

1. ねらい

救急診療として重要な「急性大動脈解離」という疾患を通して、診療を実践していくために必要な、構造と機能、診断と検査の基本について統合的に理解する。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。

2. 概要（大まかな学習目標・項目）

様々な症状を呈しうる「急性大動脈解離」という疾患を通して、症候から鑑別診断を考え、心臓超音波検査やコンピューター断層撮影（CT）などの基本的な画像検査の読み方を学び、ガイドラインを用いた治療方針の決定を行い、診断から治療までに必要な診療を経験することを目標とする。

1) 症候・病態 臨床推論

(1) 意識障害・失神

(2) ショック

(3) 胸痛

(4) 腹痛

(5) 腰背部痛

(6) 心停止

2) 診断と検査の基本

(1) 胸部単純エックス線撮影写真の主な所見を説明できる

(2) 心臓超音波検査の主な所見を説明できる

(3) コンピューター断層像(CT)の主な所見を説明できる

3) 医療行動学、医療倫理、医療安全、医療法、EBMについて

(1) データベースや二次文献からのエビデンス、診療ガイドラインを検索することができる

(2) 得られた情報の批判的吟味ができる

(3) 診療ガイドラインの種類と使用上の注意を列挙できる

(4) 診療ガイドラインと水晶の強さについて違いを述べることができる

1. Objectives

This course provides an integrated understanding of the basics of structure and function, diagnosis, and examination necessary for practice of emergency medicine through an important fatal disease, acute aortic dissection. In addition, students will learn about medical behavioral science, medical ethics, medical safety, medical law (medical system), and EBM.

2. Outline (general learning objectives and items)

Students will learn how to read basic imaging tests such as echocardiography and computed tomography (CT). They will also learn how to determine the treatment plan using guidelines and will experience a process required from diagnosis to treatment.

1) Symptoms and pathophysiology, Clinical reasoning

- (1) Disorders of consciousness, syncope
- (2) Shock
- (3) Chest pain
- (4) Abdominal pain
- (5) Back pain
- (6) Cardiac arrest

2) Basics of diagnosis and examination

- (1) Explaining the main findings of simple chest radiographs
- (2) Explaining the major findings of cardiac ultrasonography
- (3) Explaining the major findings of computed tomography (CT)

3) Learning medical behavior, medical ethics, medical safety, medical law, and EBM

- (1) Improving ability to search for evidence and medical guidelines from databases and secondary literature
- (2) Assessing critically the obtained information
- (3) Listing the types of medical guidelines and precautions for their use
- (4) Describing the differences between guidelines and recommendations

4. Textbook/Reference Books

2020 年改訂版 大動脈瘤・大動脈解離診療ガイドライン（日本循環器学会）

Guidelines for the Medical Treatment of Aortic Aneurysm and Aortic Dissection, Revised Edition 2020 (Japanese Circulatory Society)

5. Assessment

口頭試問により，学習目標・項目に対する理解度を評価する．

The achievement level each student will be evaluated by oral examination.

6. Out of Class Study/Message

事前に「2020 年度改訂版 大動脈瘤・大動脈解離診療ガイドライン」をダウンロードし，大動脈解離に関する項目に目を通しておくが良い．時間が限られている場合は「定義・病態・疫学」および「症状・検査・診断」の章を読むことが好ましい（10 ページ程度）．

Beforehand, students should read through the section on "Aortic dissection" in the "Guidelines for the Medical Treatment of Aortic Aneurysm and Aortic Dissection, Revised Edition 2020" (Japanese Circulatory Society).

Topics and Contents of class, Course Objectives						
	Class Date	Period	Class Format	Topics and Contents of class, Course Objectives	Instructors	Class Room
1	7/4 (Mon)	1-2	Tutorial	Theme: Orientation and pre-test Student's level of understanding regarding acute aortic dissection will be checked by pre-test.	Daichi Takagi	Conference room, Department of Cardiovascular surgery
2	7/4 (Mon)	3-4	Lecture	Theme: Acute aortic dissection symptom and diagnosis Learning about the symptoms, examination, and imaging necessary for diagnosis of acute aortic dissection.	Daichi Takagi	Conference room, Department of Cardiovascular surgery
3	7/4 (Mon)	5-6	Lecture	Theme: Diagnostic Imaging Intensive course learning the basic knowledge required for imaging evaluation and the imaging classification of aortic dissection in CT.	Daichi Takagi	Conference room, Department of Cardiovascular surgery
4	7/4 (Mon)	7-8	Lecture	Theme: Respiratory management after cardiovascular surgery. Intensive course learning respiratory management after cardiovascular surgery.	Daichi Takagi	Conference room, Department of Cardiovascular surgery
5	7/4 (Mon)	9-10	Lecture	Theme: Circulatory management after cardiovascular surgery. Intensive course learning circulatory management after cardiovascular surgery.	Daichi Takagi	Conference room, Department of Cardiovascular surgery
6	7/5 (Tue)	1-2	Lecture	Theme: Acute aortic dissection treatment and surgery Intensive course learning treatment and surgery for acute aortic dissection.	Daichi Takagi	Conference room, Department of Cardiovascular surgery
7	7/5 (Tue)	3-4	Lecture	Theme: Case Study 実際の症例の経過・画像・治療について討議を行う。 Case study approach and discussion on diagnoses and treatments	Daichi Takagi	Conference room, Department of Cardiovascular surgery
8	7/5 (Tue)	5-6	Practice	Theme: Basic surgical training (mock training) 1 Surgical training on ligation and suture of the skin.	Daichi Takagi	Conference room, Department of Cardiovascular surgery
9	7/5 (Tue)	5-8	Practice	Theme: Basic surgical training (mock training) 2 Surgical training on vascular anastomosis using prosthetic grafts.	Daichi Takagi	Conference room, Department of Cardiovascular surgery
10	7/5 (Tue)	9-10	Discussion	Theme: Preoperative conference Joining the conference and discussing on preoperative patients.	Daichi Takagi	Conference room, Department of Cardiovascular surgery

Topics and Contents of class, Course Objectives						
	Class Date	Period	Class Format	Topics and Contents of class, Course Objectives	Instructors	Class Room
11	7 / 6 (Wed)	1-2	Lecture	Theme: Case study Discussion on acute aortic dissection under instructors.	Daichi Takagi	Conference room, Department of Cardiovascular surgery
12	7 / 6 (Wed)	3-4	Formative assesment	Theme: Post-course examination Student's level of understanding regarding acute aortic dissection will be checked after the course.	Daichi Takagi	Conference room, Department of Cardiovascular surgery