

Anatomy of Thorax and abdomen -MED 1206

Year 1 Semester 2

Credits: 4

Module Coordinator: Prof. SB Adikari

CONCEPT	OBJECTIVES	Duration	T/L activity	Comments
1. Osteology and surface marking of thorax and abdomen	<p>Student should be able to:</p> <ul style="list-style-type: none"> • identify and orientate the bones that form the thoracic cage • state the boundaries of the thoracic inlet outlet • state and demonstrate the bony landmarks of the thorax • count the ribs and intercostal spaces. • demonstrate the surface markings of the heart, pericardium, lungs and the pleura. • identify and orientate the lumbar vertebrae and bones forming the pelvis. • state the boundaries of the pelvic inlet and outlet. • define the greater and lesser pelvic cavities • identify important muscle attachments on the bones studied 	4hrs	PD	<p>Practical using bones, skeleton and volunteers and dissection manual</p> <p>(Surface anatomy, planes and regions of abdomen will be done under “ Surface anatomy of Abdomen- Concept No 12)</p>
2. Anterior thoracic wall	<ul style="list-style-type: none"> • describe the arrangement of the muscles of the chest wall • describe the arrangement of structures in the intercostal space • describe the movement of the chest wall during respiration and state its mechanism • describe the blood supply, nerve supply and lymphatic drainage of the chest wall and intercostals spaces • draw and label the dermatomes of the chest wall 	<p>3 hrs</p> <p>12hrs</p>	<p>Lectures</p> <p>Dissection</p>	<p>Lectures:</p> <ol style="list-style-type: none"> 1. General arrangement of thorax and abdomen (1hr) 2. Arrangement of anterior thoracic and abdominal walls (1hr) 3. Inguinal region and clinical anatomy (1hr)

<p>3. Anterior abdominal wall and Inguinal canal</p>	<ul style="list-style-type: none"> • describe the arrangement of muscles of the anterior abdominal wall • describe the formation of the rectus sheath • describe the formation of the inguinal canal and its boundaries • state the contents of the inguinal canal • describe the coverings of the spermatic cord • describe the formation of hernia • explain the embryological descent of testes in relation to adult anatomy • describe development of anterior body wall • describe dermatomes of chest and abdominal walls 	<p>1 hr</p>	<p>Body side SGD</p>	
<p>4. Mediastinum and mediastinal viscera</p>	<ul style="list-style-type: none"> • describe the boundaries of the mediastinum and its divisions • describe the structures in the different divisions of the mediastinum and state their relations • describe the arrangement of the pericardium • state the nerve supply of the pericardium • state the functions of the pericardium • state the clinical correlations of the pericardium • describe the position of the heart and the great vessels in the mediastinum • describe the internal and external appearance and structure of the heart(chambers, valves, ect) • describe the blood supply of the heart. • identify the cardiac silhouette and the parts of the heart and great vessels that contribute to the outline of it • describe the conducting system of the heart • describe the arrangement of the great vessels • describe the relations of the heart and the great vessels 	<p>2hr 15hrs 1 hr 2hrs</p>	<p>Lectures Dissections Body side SGD Tutorial</p>	

	<ul style="list-style-type: none"> • describe the microscopic structure of heart and blood vessels and correlate the structure function relationship • describe the anatomy of lymphoid organs and lympho-reticular system • describe the clinical correlations of the heart and great vessels 	2 hrs	Lectures (Histology & Clinical Anatomy)	
		3 hrs	PD (Histology)	
5. Development of the heart and blood vessels	<ul style="list-style-type: none"> • describe the development of the heart and blood vessels • describe the foetal circulation • describe the circulatory changes that occur at birth • describe the congenital anomalies of the heart and blood vessels 	1 hr	Lecture	
6. Lungs and pleurae	<ul style="list-style-type: none"> • describe the anatomy of the pleura and pleural cavities • surface mark the pleura and lungs • state and describe the common clinical problems of the thoracic cavity (pleural effusion, pneumothorax, haemothorax) • describe the anatomical basis of the pleural tap and surgical approaches to the thorax • identify the lungs and parts of the airways • describe the bronchial tree and bronchopulmonary segments • describe and identify the microscopic structures of the lungs and bronchial tree • correlate the structure of lungs and airways with its function • describe the blood supply, nerve supply and lymphatic drainage of lungs and airways • identify lungs and airways in relation to other structures in the thoracic cavity • describe the surface projections of the apex of the lungs and the fissures of the lungs 	3 hrs	Lectures	Lectures: 1. Gross anatomy and development (2 hrs) 2. Histology (1 hr)
		3hrs	Dissection	
		3 hrs	PD (Histology)	
		2 hrs	Tutorial	

7. Development of the respiratory tract	<ul style="list-style-type: none"> development of the respiratory system and associated developmental abnormalities 		Lecture	Lecture done with gross anatomy lecture of lungs and pleurae
8. Cross Sectional anatomy of thorax	<ul style="list-style-type: none"> understand the importance of cross sectional anatomy identify structures in cross sections of the thorax identify the above structures in a cross sectional radiographs 	1 hr 3 hrs	Lecture PD	Allocate dissection hours of concept no 8 and 9 close to each other in order to arrange museum rotations
9. Diaphragm	<ul style="list-style-type: none"> describe the component parts of the diaphragm and state its functions describe the nerve supply and blood supply of the diaphragm state and identify structures passing through the diaphragm including the vertebral levels use the knowledge of anatomy in examining the respiratory system 	1hr 3 hrs 1 hr	Lecture Dissections Body side SGD	Body side tutorial includes all gross anatomy objectives covered up to now
	<ul style="list-style-type: none"> state and describe the common clinical problems of the thoracic cavity describe the clinical correlations of diaphragm related to respiration describe the development of the diaphragm including its congenital abnormalities 	1 hr	Lecture	
10. General arrangement of gastrointestinal system	<ul style="list-style-type: none"> state the main functions of the gastrointestinal system. outline the general structure of gastrointestinal system to perform the functions describe the general pattern and microscopic anatomy of the alimentary canal 	1 hr	Lecture	

11. Oral cavity	<ul style="list-style-type: none"> • describe the boundaries of the oral cavity. • state how the structures in the oral cavity are adapted to perform the functions (teeth, tongue, salivary glands etc) • outline the macroscopic and microscopic features of the structures in the oral cavity including the salivary glands • state and identify the muscles forming the floor of the mouth • name and identify the types of teeth in the deciduous and permanent dentition • state the development and eruption times of teeth and its relevance in aging 	2 hrs	Lectures PD	PD: will be done with oesophagus and stomach
12. Surface anatomy of abdomen	<ul style="list-style-type: none"> • State how the abdomen is divided into nine regions and four quadrants • State the surface projections of abdominal structures. • Outline the procedure of clinical examination of the abdomen. 	1 hr 3 hrs	Video demonstration PD	Surface projections of the abdominal organs and anatomical basis of clinical examination of the abdomen will be done.
13. Abdominal cavity and its compartmentalization	<ul style="list-style-type: none"> • describe the general arrangements of viscera in the abdominal cavity • understand the arrangement of the peritoneum and its relationship with the abdominal organs • describe the peritoneal reflexions • localise the viscera within the abdominal cavity and learn their gross landmarks and features 	1 hr 6 hrs	lecture Dissections	

<p>14. Abdominal viscera</p>	<ul style="list-style-type: none"> describe the gross anatomy of abdominal viscera (oesophagus, stomach, duodenum, jejunum, ileum, colon, rectum and anal canal, liver and biliary system, pancreas, spleen,) describe the lymph drainage and nerve supply describe the microscopic anatomy of abdominal viscera. (oesophagus, stomach, duodenum, jejunum, ileum, colon, rectum and anal canal, liver and biliary system, pancreas) list the functions of abdominal viscera. explain the basis of structure function relationship 	<p>5 hrs</p> <p>3 hrs</p> <p>12 hrs</p> <p>3 hrs</p> <p>2 hrs</p> <p>2 hrs</p>	<p>Lectures- Gross anatomy of</p> <ol style="list-style-type: none"> oesophagus and stomach (1hr) Small and large intestines, lymphatics and nerves (2hr) Liver, biliary system, pancreas and spleen (2hrs) <p>Lectures - Histology of GIT</p> <p>Dissections</p> <p>Histology PD</p> <p>Body side SGD</p> <p>Tutorial</p>	<p>Detailed structure of kidneys, ureters and adrenal glands will be done in pelvis and perineum module.</p> <p>Regional anatomy of rectum and anal canal will be done in pelvis and perineum module.</p> <p>Histology practical to be done after completing the macroscopic structures of small and large intestine</p>
<p>15. Development of the gatro-intestinal system</p>	<ul style="list-style-type: none"> describe the development of the gastro-intestinal system and its anomalies 	<p>4 hrs</p>	<p>Lectures</p>	<p>Lectures to be scheduled along with the dissections of the relevant structures</p>
<p>16. Posterior abdominal wall and retroperitoneum</p>	<ul style="list-style-type: none"> describe the arrangement of muscles and fascia of the posterior abdominal wall describe the anatomy of the posterior abdominal wall and the retroperitoneal structures (abdominal aorta, IVC, kidneys, ureters, bladder and adrenal glands) 	<p>1x2 hrs</p> <p>3 hrs</p>	<p>Lectures</p> <p>Dissection</p>	

	<ul style="list-style-type: none"> • list the components of the urinary system • describe the gross structure of the kidneys, ureters and bladder 	2 hrs	Lecture	
	<ul style="list-style-type: none"> • describe how the urinary system is adapted to perform its function • describe the unique blood circulation of the kidney • describe the venous and lymphatic drainage and nerve supply of the kidney 	3 hrs	Dissection & Histology PD	
	<ul style="list-style-type: none"> • describe the histological appearance of the urinary system • 			

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