

Colour

Atlas of Human Anatomy

ABDOMEN



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First edition

Publication and Book Development Division,
National Library and Documentation Services Board,
Colombo 7, Sri Lanka.

ISBN 978-955-42477-4-1
Bar Code 9 789554 247741

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First published in 2016

**Colour Atlas
of
Human Anatomy - Abdomen**

Message from the Authors

Colour Atlas of Human Anatomy – Abdomen is designed to provide an understanding of the human abdominal region for undergraduate and post graduate students in Medicine and Allied Health Sciences. It is a practical guide in the dissection theatre to unfold the position and relations of the structures of the abdomen.

Despite many Anatomical Atlases currently available, there appeared to be a need for an Atlas which compliments the Cunningham's Manual of Practical Anatomy, which is widely accepted all over the world as a standard anatomy text. This Atlas was conceived with the intention of fulfilling that need.

Colour Atlas of Human Anatomy – Abdomen follows the Cunningham's Manual of Practical Anatomy (Volume 2). It consists of sequential photographs taken at various stages of dissection of the abdominal region. Hence the photographs allow side by side comparison with anatomical structures encountered during the dissections. In this way, we hope to bridge the gap between description of the text book and what students see in the cadavers.

All photographs are completely labeled for the ease of student's comprehension and identification of salient anatomical features on dissected specimens. Specimens are labeled enabling students to carry out self-testing of their knowledge.

Anatomy dissection is a contemplative manual activity. It took us a long time of hard work to accomplish this task. We sincerely believe that visually attractive labeled anatomical photographs and its unique blend with the Cunningham's Manual of Practical Anatomy (Volume 2), will undoubtedly help students to gain a better understanding of the human abdominal region.

Senior Professor B.G. Nanayakkara

Professor Isurani Ilayperuma

Dr. S. K. Y. I. Kodikara

Acknowledgements

Editorial assistance & cover design

Dr. D. L. H Dilshan

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Foreword

Although we all have a strong desire to author a book at some stage in our life, only a few accomplish this mission. Writing a book requires dedication and commitment, hence writing four books in one selected area is really commendable.

I feel honoured and privileged to write a foreword to this book authored by Professor Ganananda Nanayakkara, Professor Isurani Illayperuma and Dr. Iroshani Kodikara, three senior academics in the field of Anatomy. This book on Abdomen follows the first version on Head and Neck, Upper Limb and Thorax, and I hope that authors will address the other areas too, to make this a series of publications.

Anatomy which provides the backbone of medicine is possibly the first subject introduced in the field of medicine. The contribution made by the authors to the subject at very early stages is substantial. Some of the early drawings depicting the human anatomy apart from being artistic have precise anatomical details too.

Once again I congratulate the authors for their undiminished enthusiasm and commitment. I hope students will find this book attractive and a useful resource.

Senior Professor Sarath Lekamwasm

MD, FRCP, PhD (Erasmus, Rotterdam), FCCP, FRACP (Hon), FCP (SA),
FCPSP (Hon)

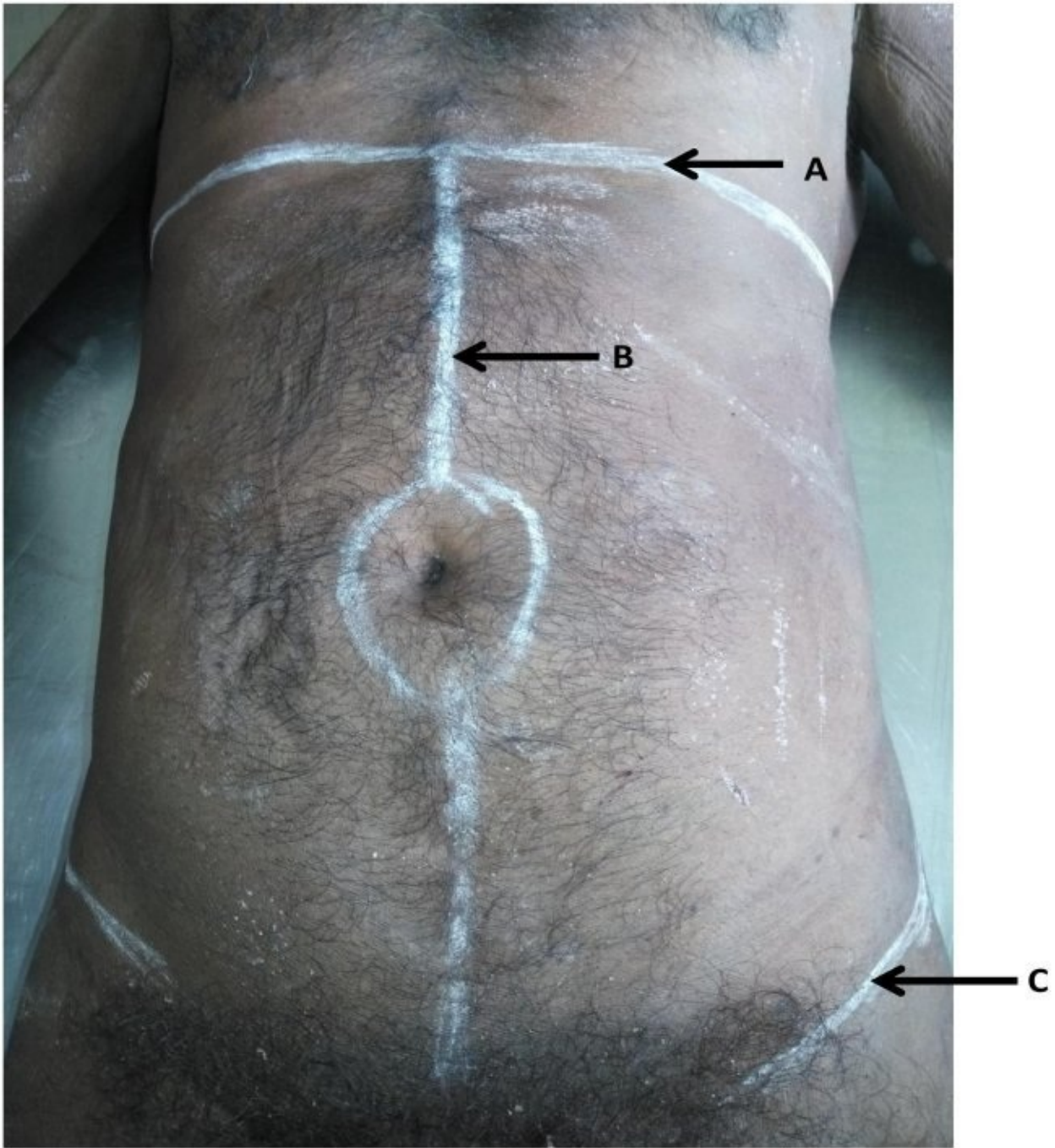
Senior Professor of Medicine & Dean,
Faculty of Medicine,
University of Ruhuna.

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Surface marking of the abdomen for incisions

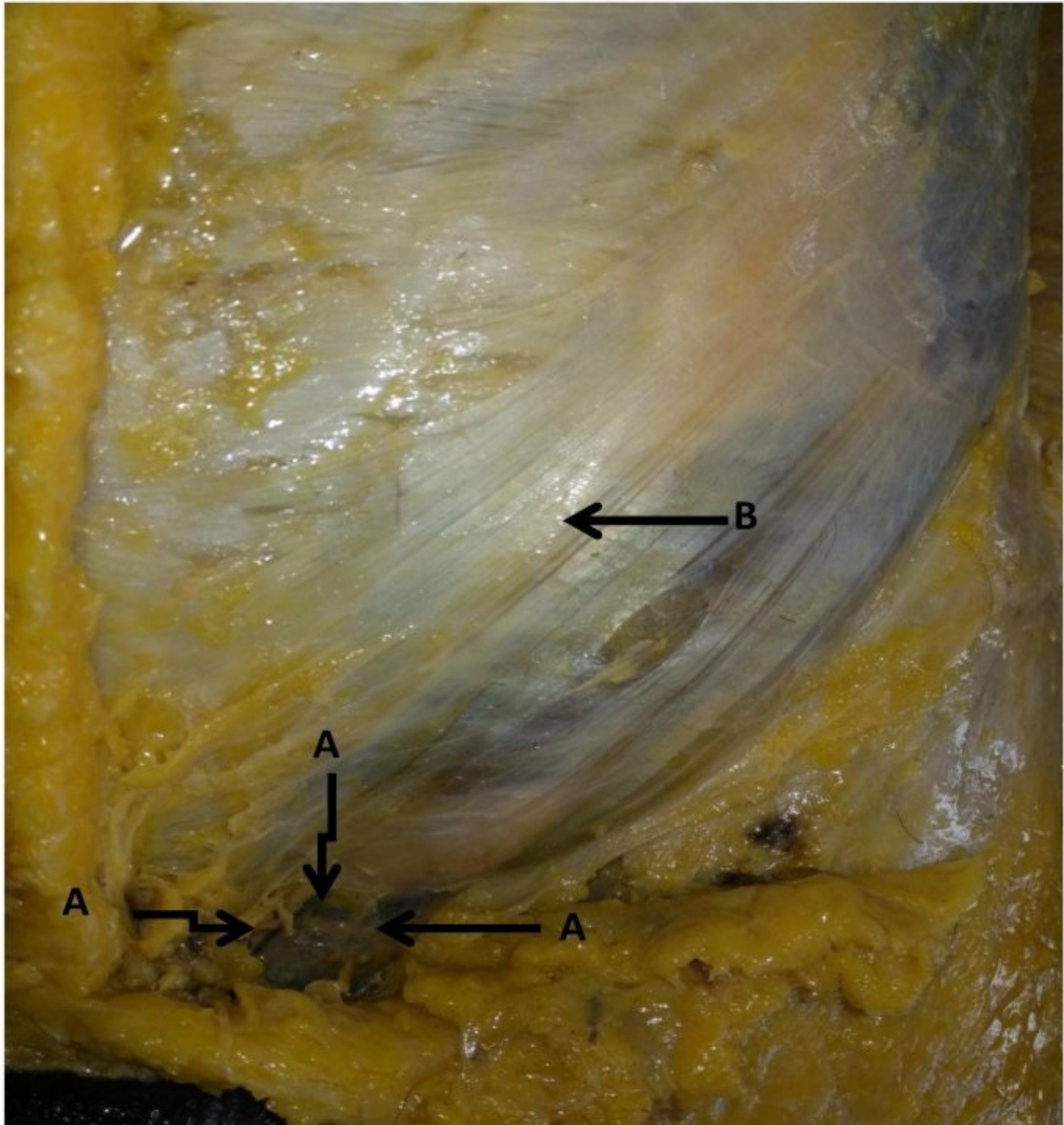


A – Horizontal line passing just below the nipples

B – Anterior midline of the abdomen

C – Line passing along the inguinal ligament

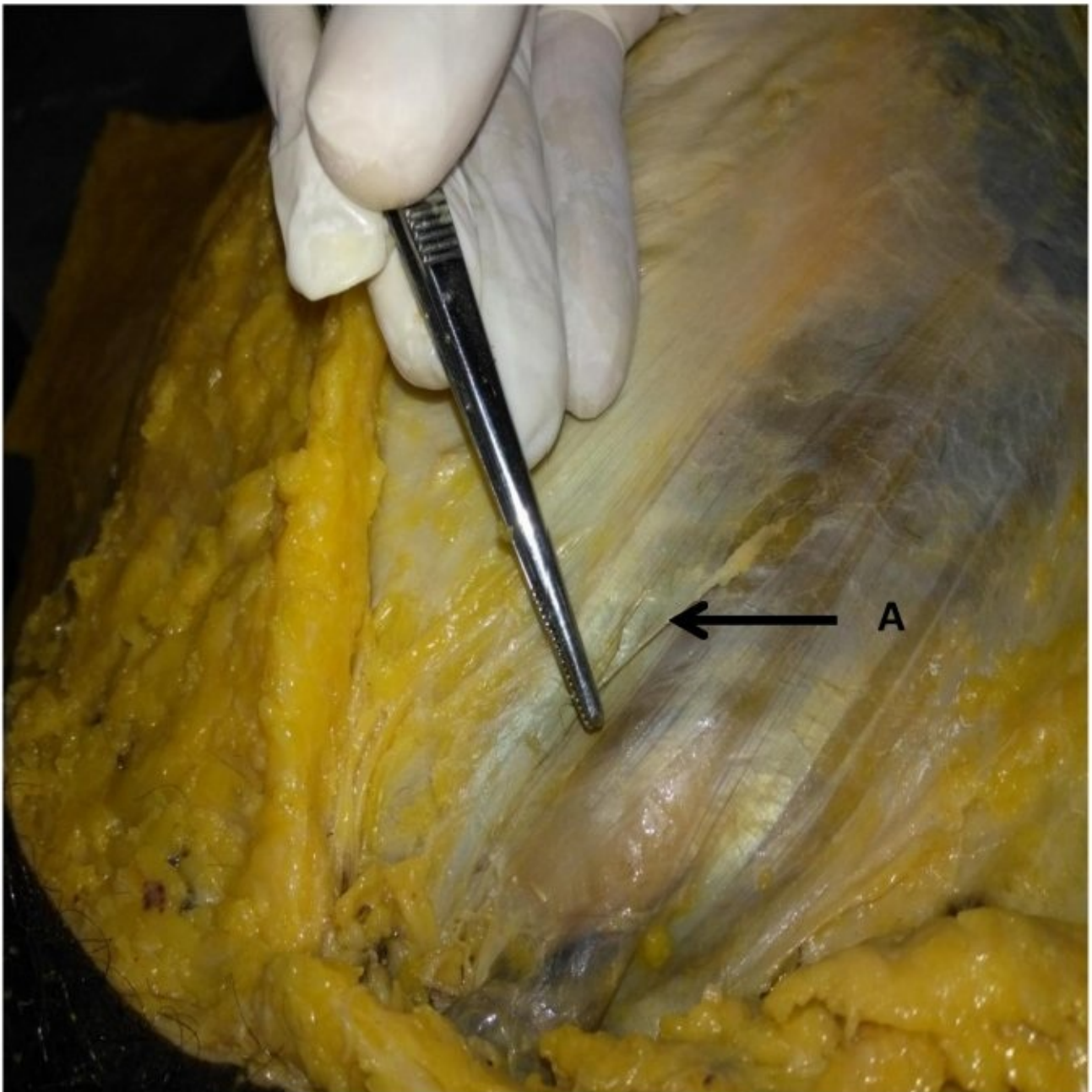
Superficial inguinal ring



A – Superficial inguinal ring

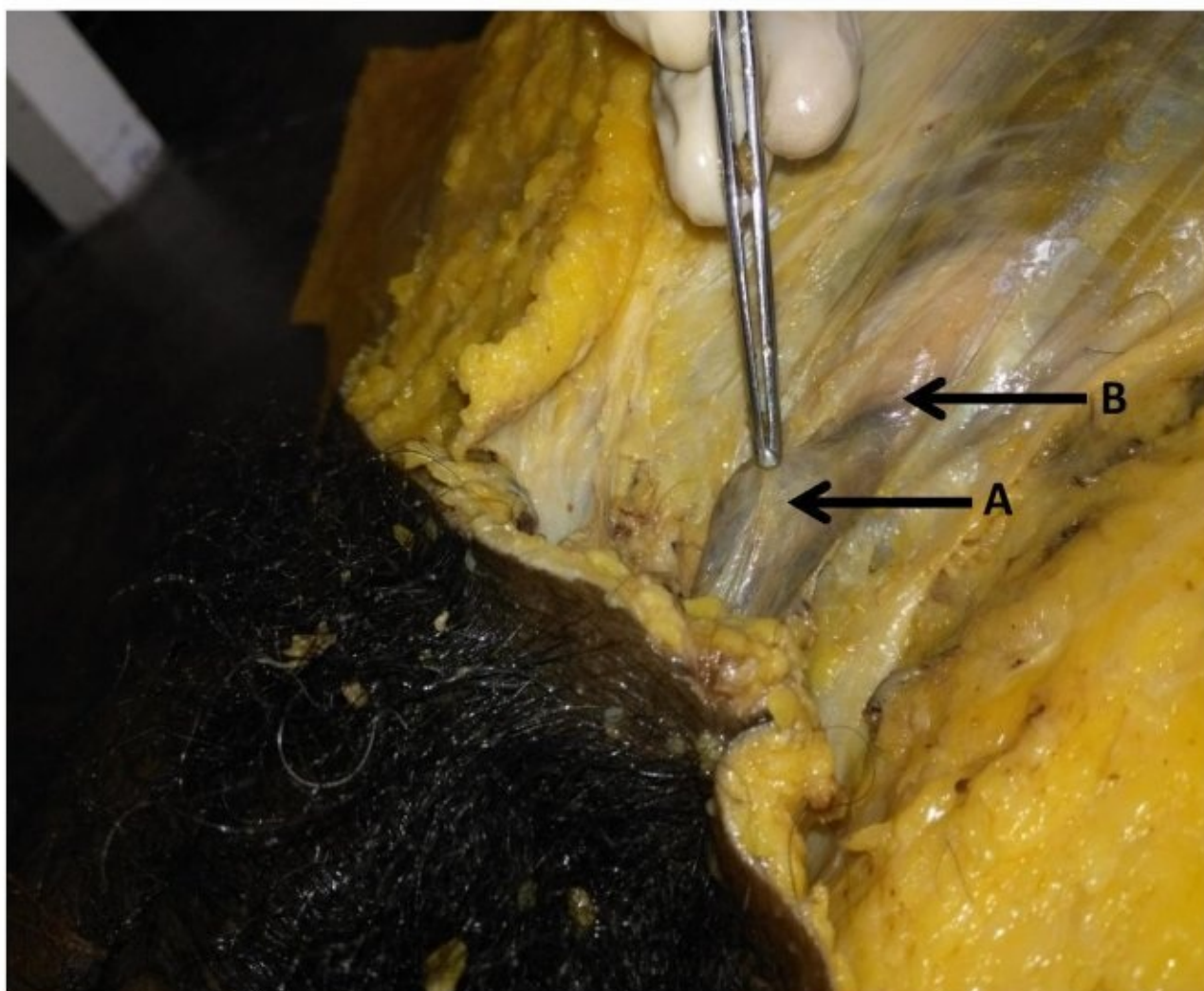
B – Aponeurosis of the external oblique muscle

Iliohypogastric nerve



A – Iliohypogastric nerve

External spermatic fascia

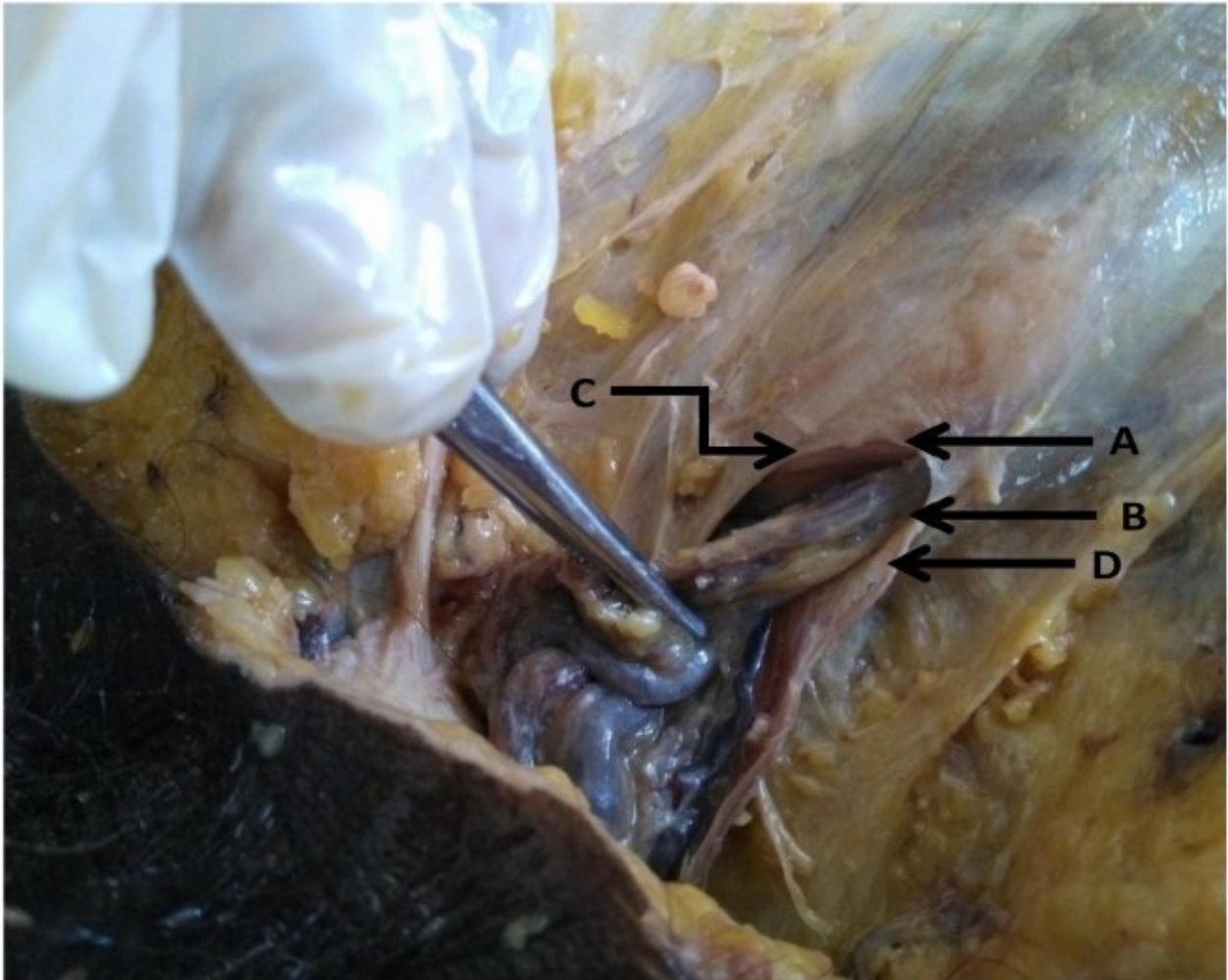


A – External spermatic fascia

B – Upper margin of the superficial inguinal ring

Superficial inguinal ring

(After dissecting the external spermatic fascia)



A – Superficial inguinal ring

B – Lateral crus of the superficial inguinal ring

C – Medial crus of the superficial inguinal ring

D – Spermatic cord

External oblique muscle

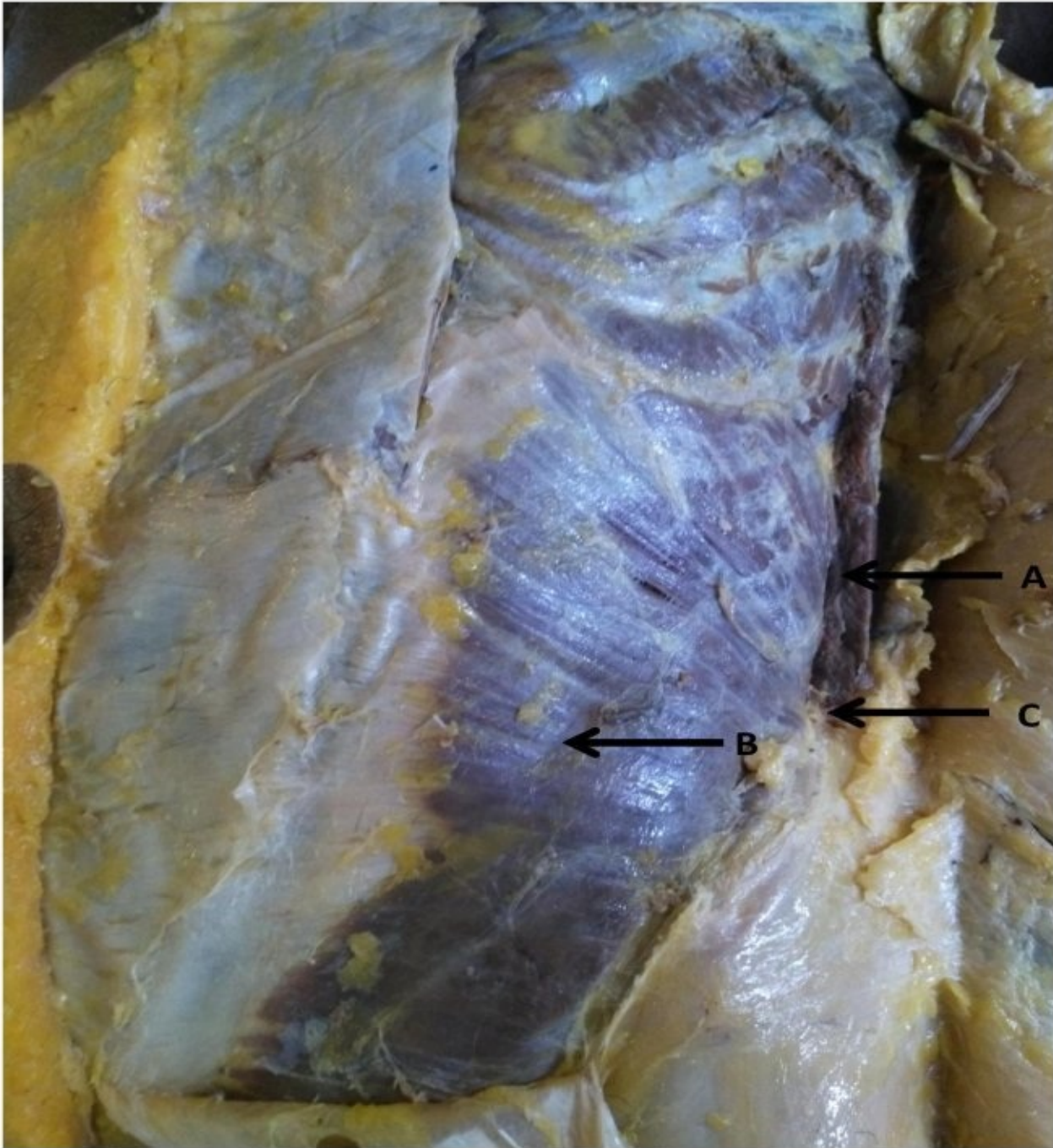


A – External oblique muscle

B – Anterior layer of the rectus sheath

C – Aponeurosis of the external oblique muscle

Internal oblique muscle



A – External oblique muscle (cut edge)

B – Internal oblique muscle

C – Anterior superior iliac spine

Inguinal region



A – Probe in the inguinal canal

B – Spermatic cord

Inguinal region



A – Inguinal canal (cut open)

B – Superficial inguinal ring

C – Deep inguinal ring

D – Spermatic cord

Inguinal region



A – Conjoint tendon

B – Spermatic cord

C – External oblique aponeurosis (reflected)

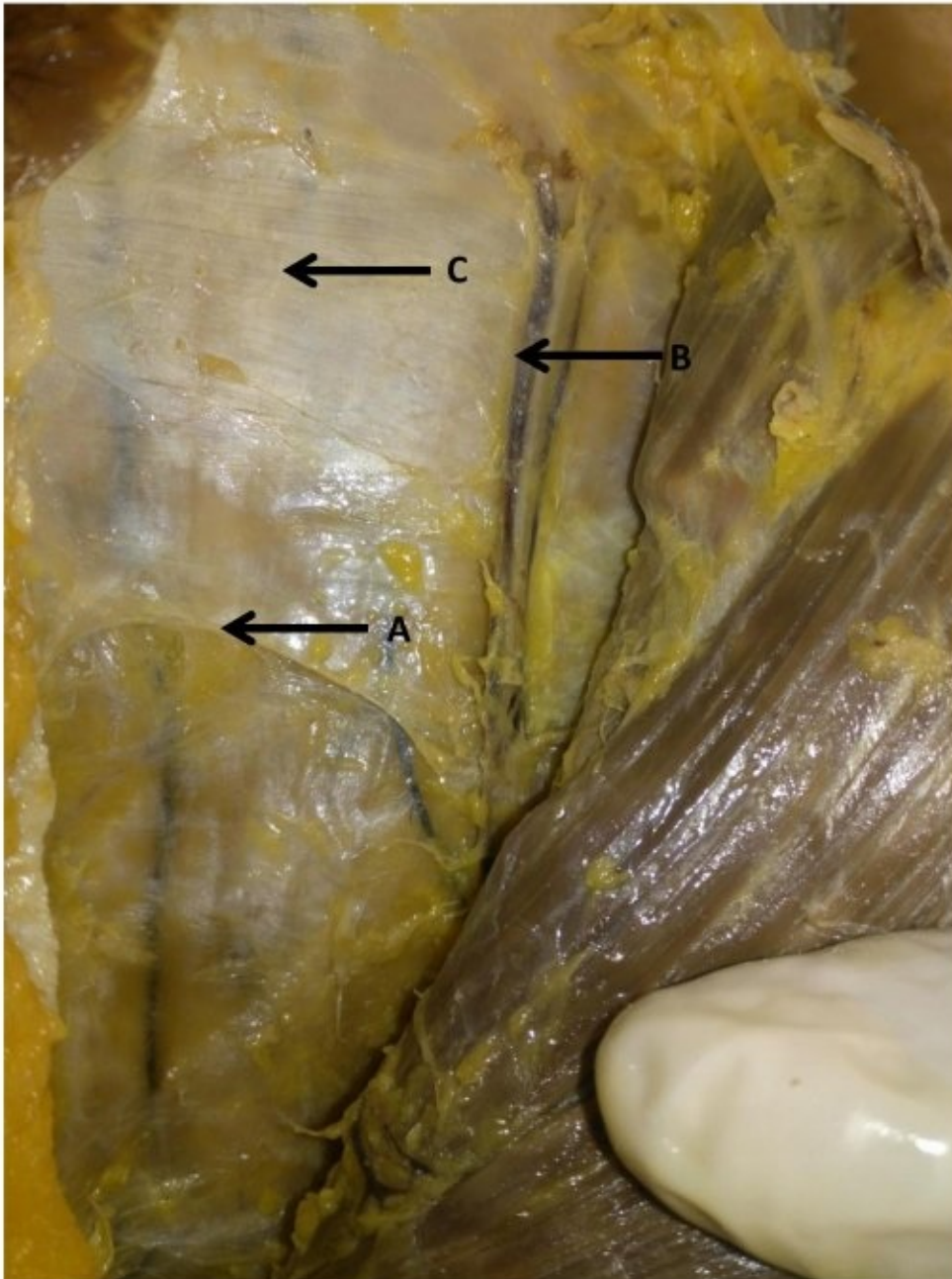
Anterior abdominal wall



A – Arcuate line

B – Reflected rectus abdominis muscle

Anterior abdominal wall

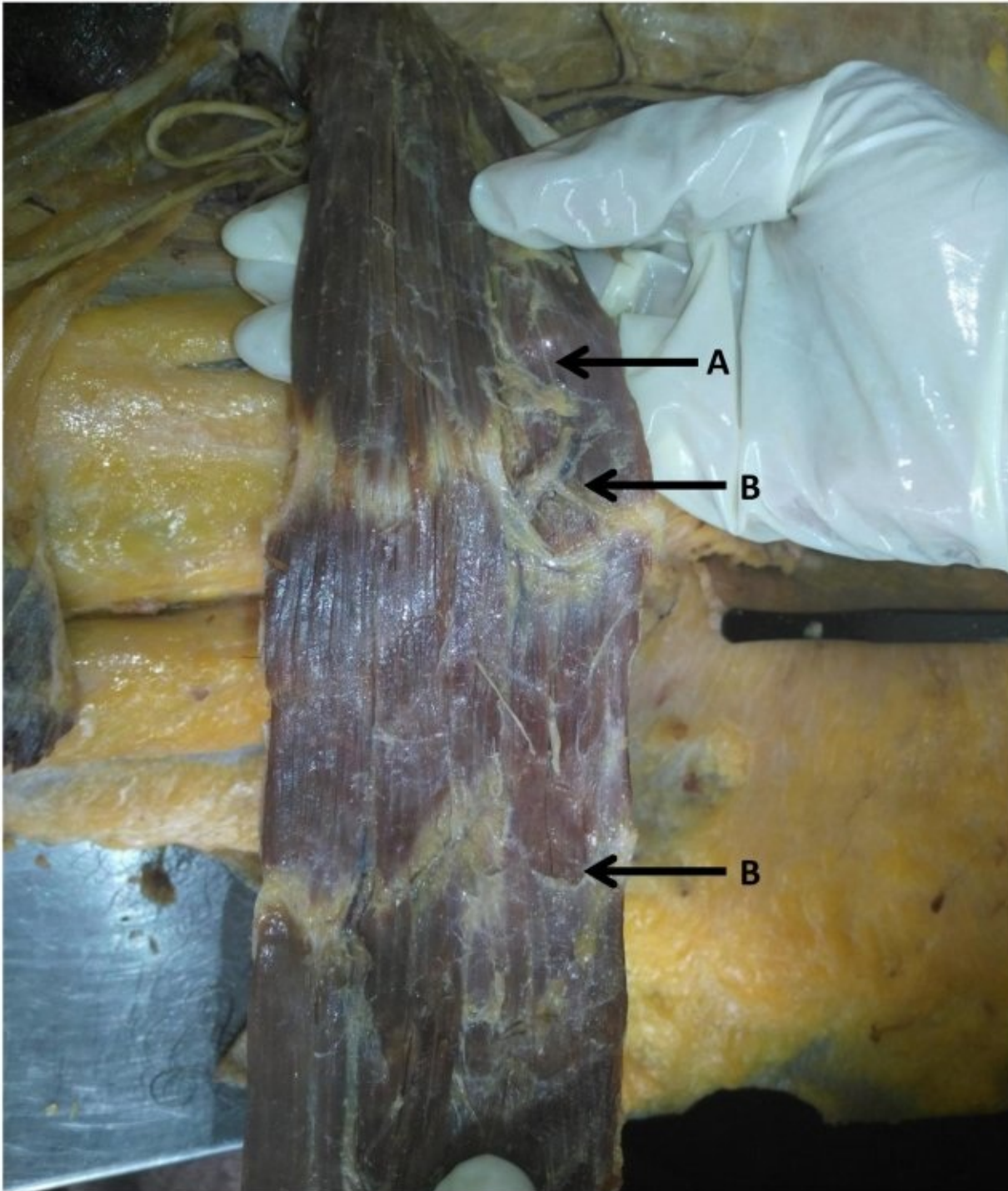


A – Arcuate line

B – Inferior epigastric vessels passing under the arcuate line into the rectus sheath

C – Posterior rectus sheath

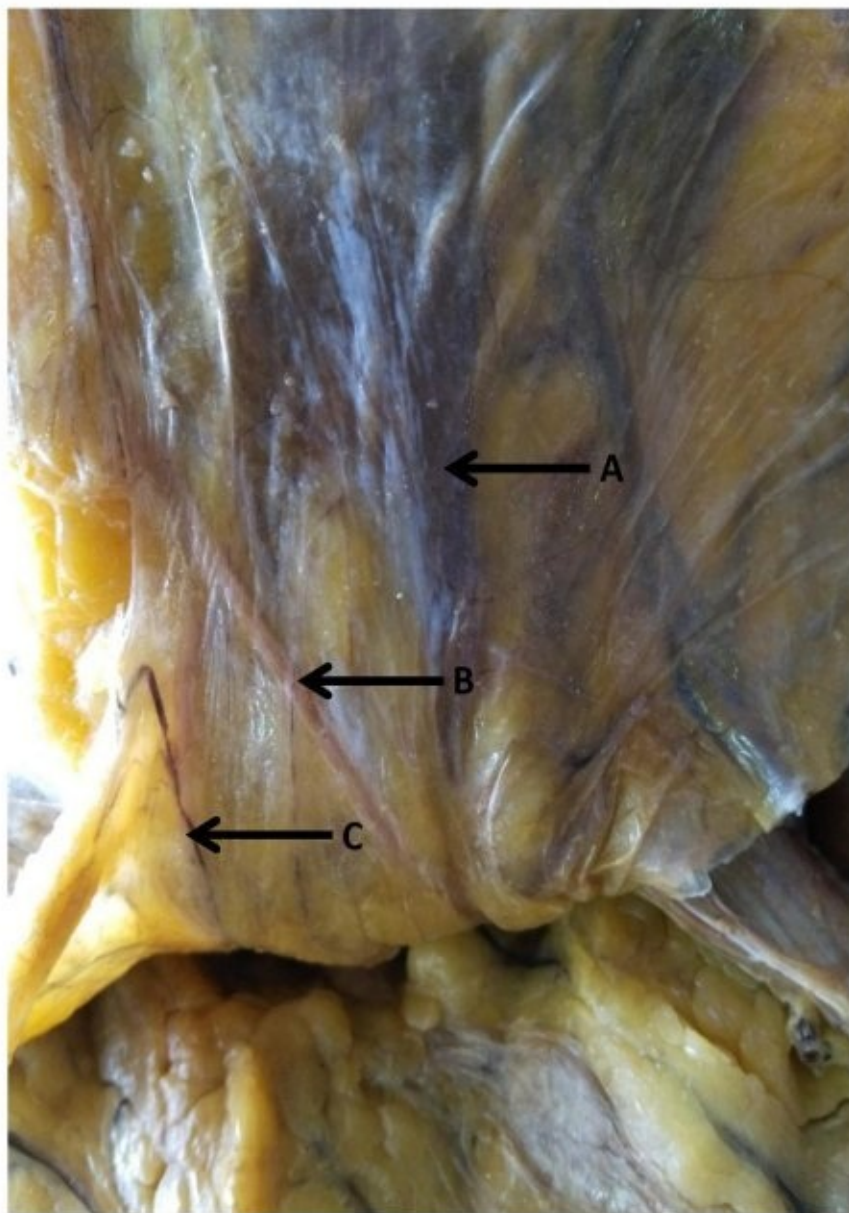
Anterior abdominal wall



A – Reflected rectus abdominis muscle

B – Tendinous intersections of the rectus abdominis muscle

Anterior abdominal wall (posterior view)

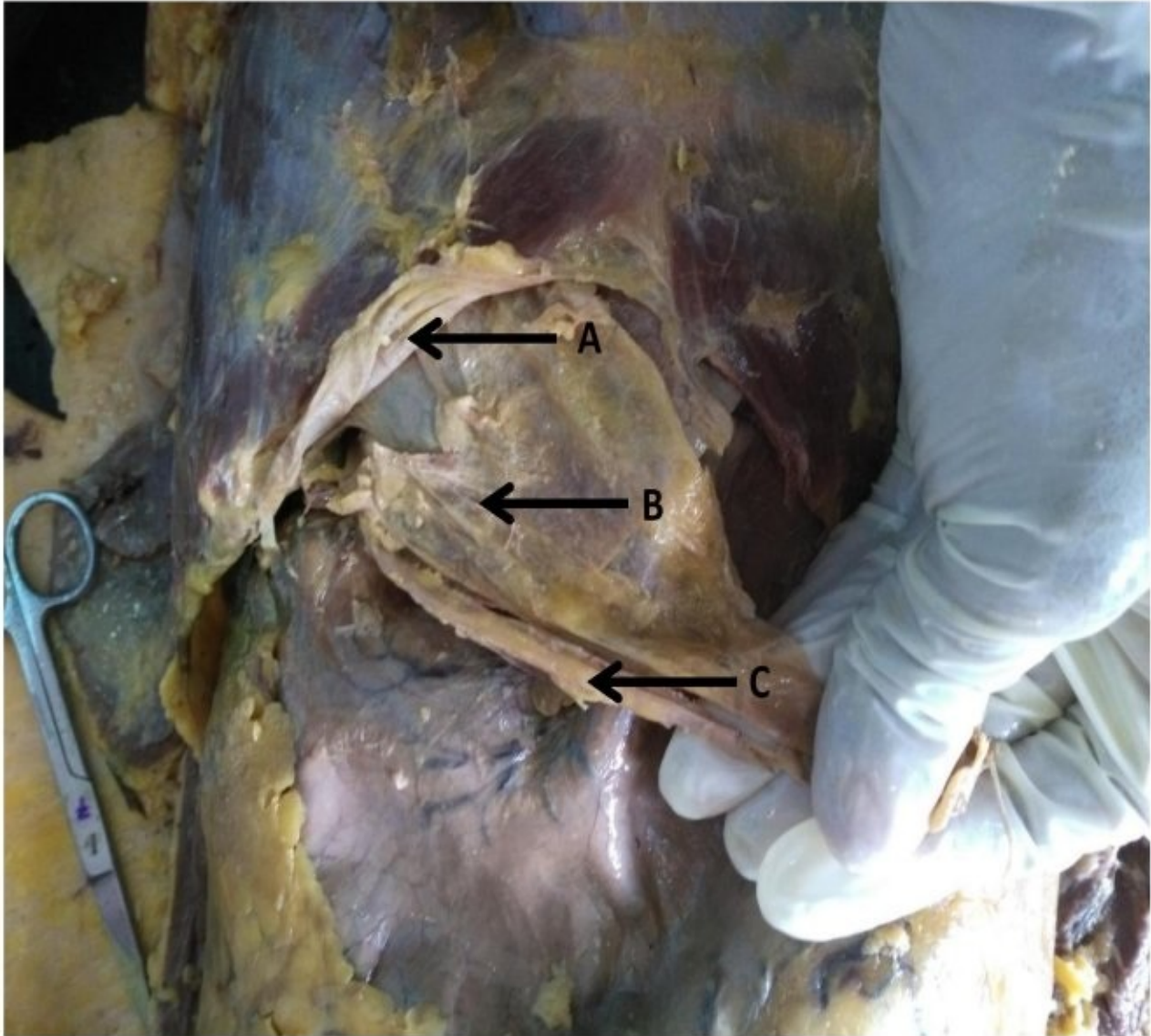


A – Median umbilical fold (remnant of the urachus)

B – Medial umbilical fold (occluded remnants of fetal umbilical arteries)

C – Lateral umbilical fold (inferior epigastric vessels)

Anterior abdominal wall

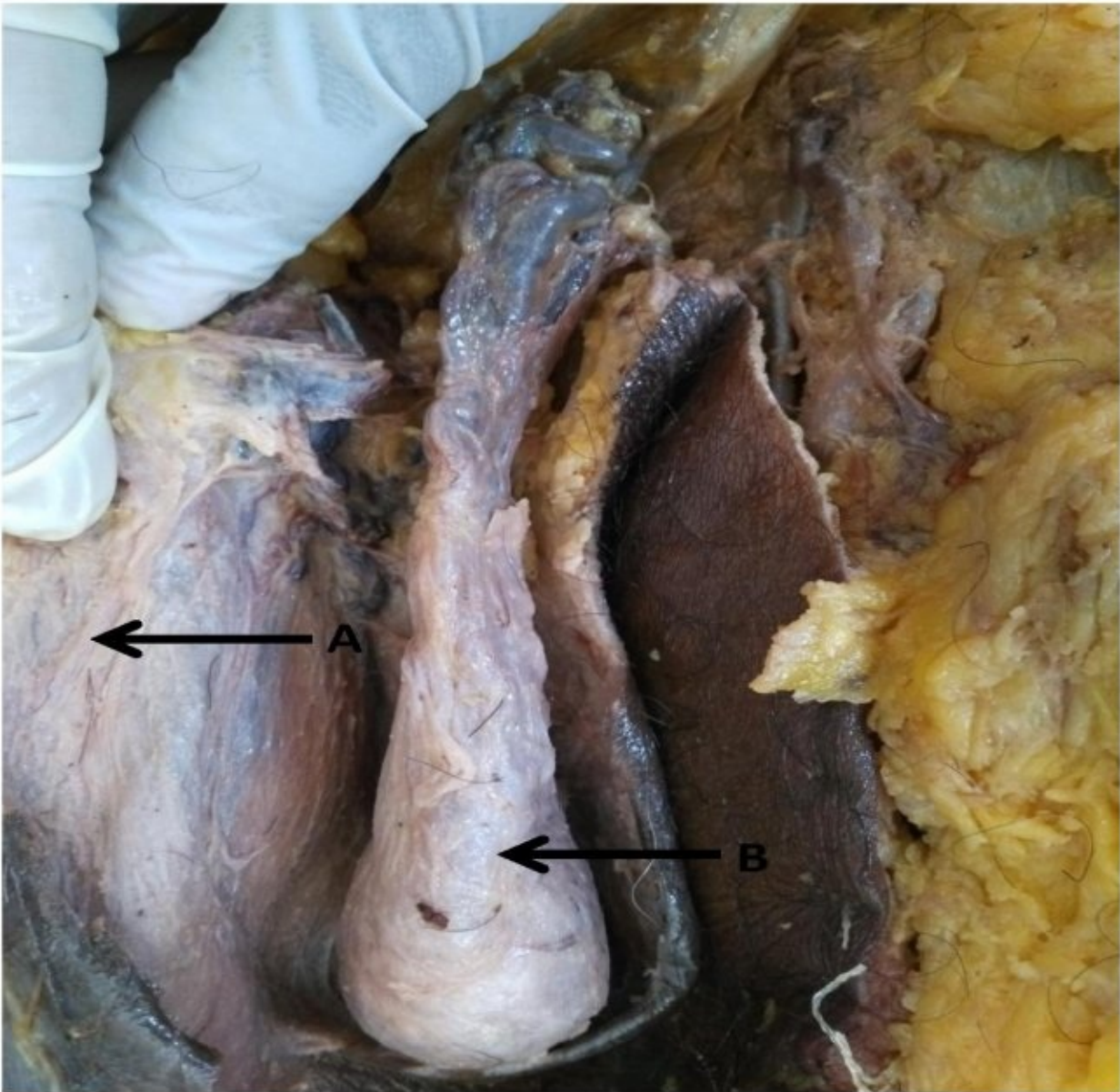


A – Subcostal line

B – Falciform ligament

C – Round ligament of the liver

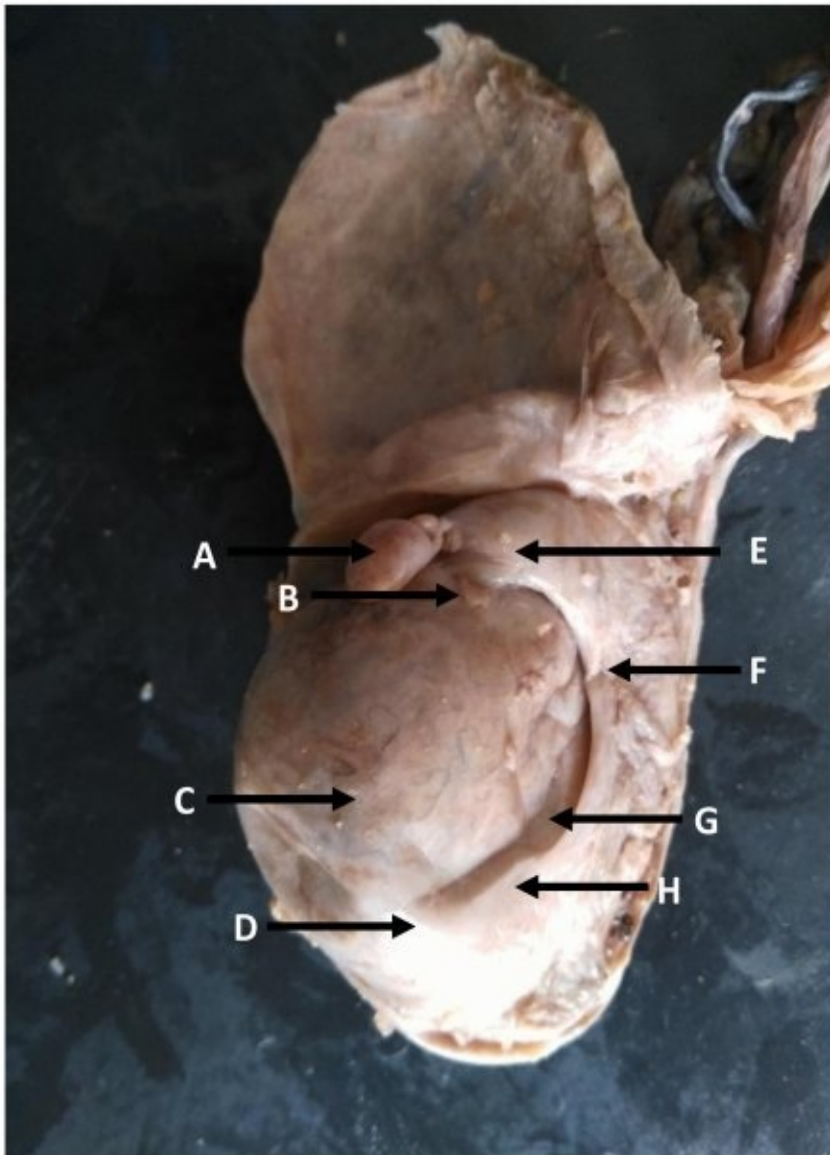
Male external genitalia



A – Dartos muscle in the scrotum

B – External spermatic fascia

Male external genitalia



A – Appendix of the epididymis

B – Appendix of the testis

C – Testis

D – Gubernacular remnant

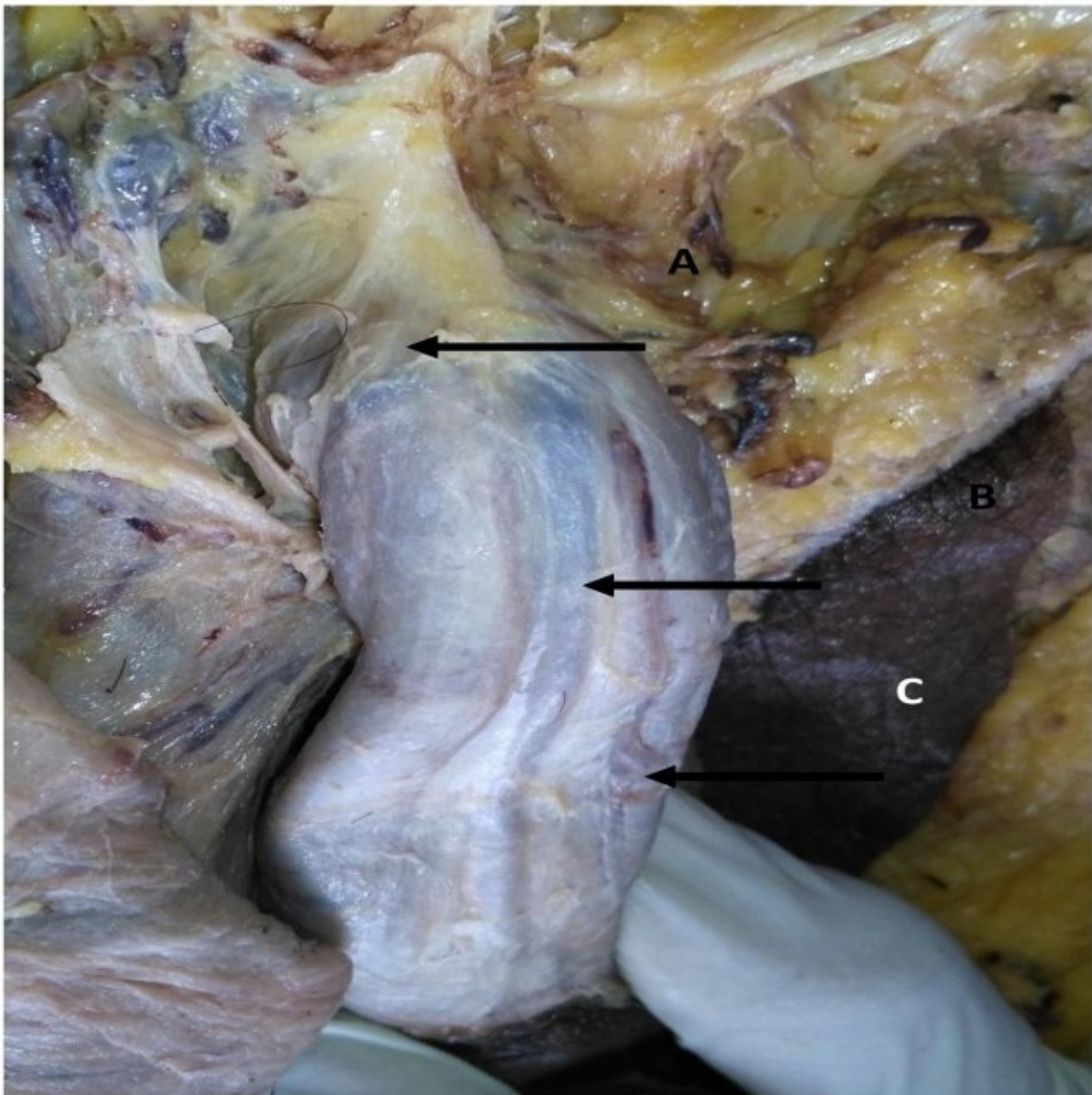
E – Head of the epididymis

F – Body of the epididymis

G – Sinus of epididymis

H – Tail of the epididymis

Dorsal surface of the penis

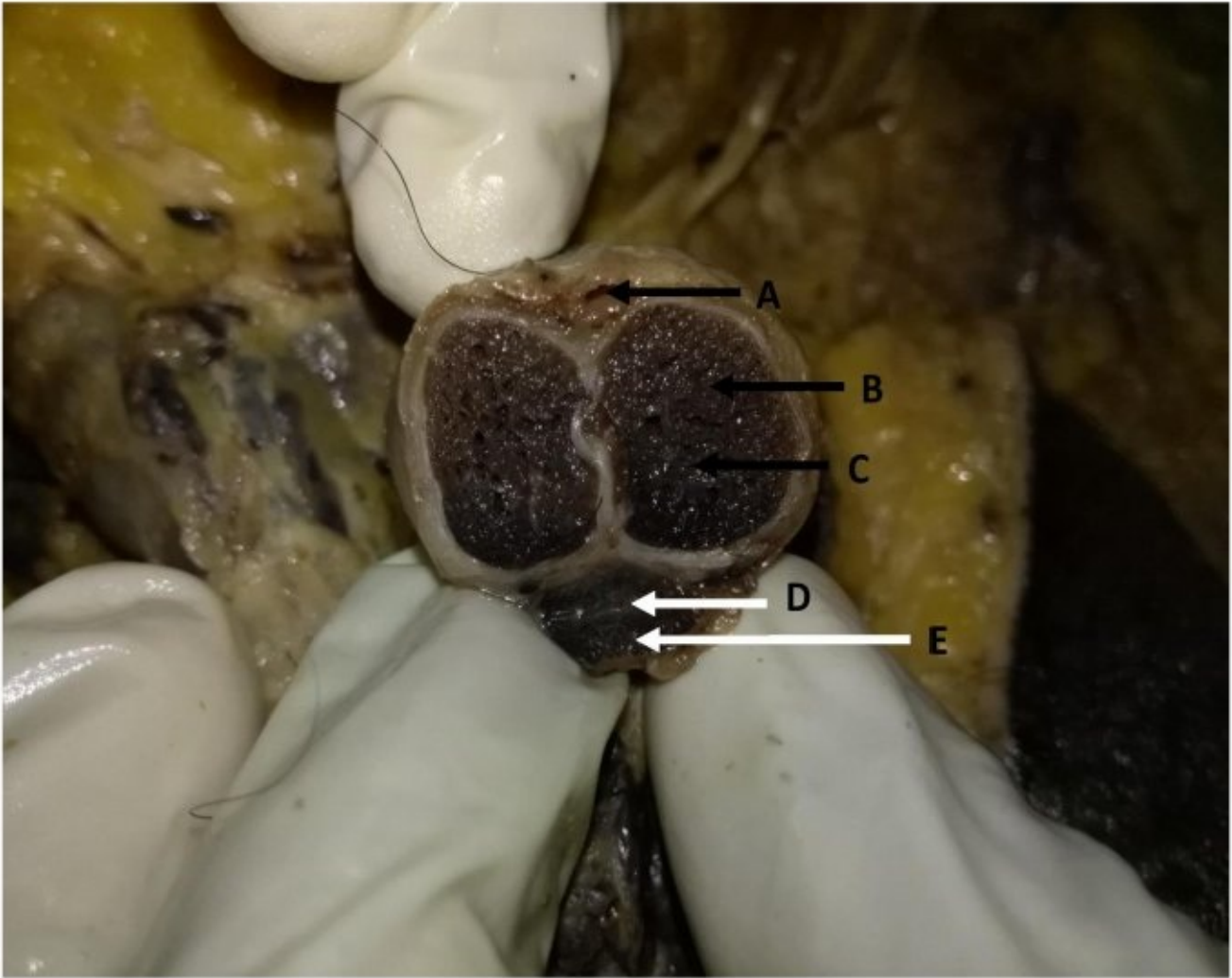


A – Suspensory ligament of the penis

B – Deep dorsal vein

C – Dorsal artery

Penis (cross section)



A – Dorsal vein of the penis

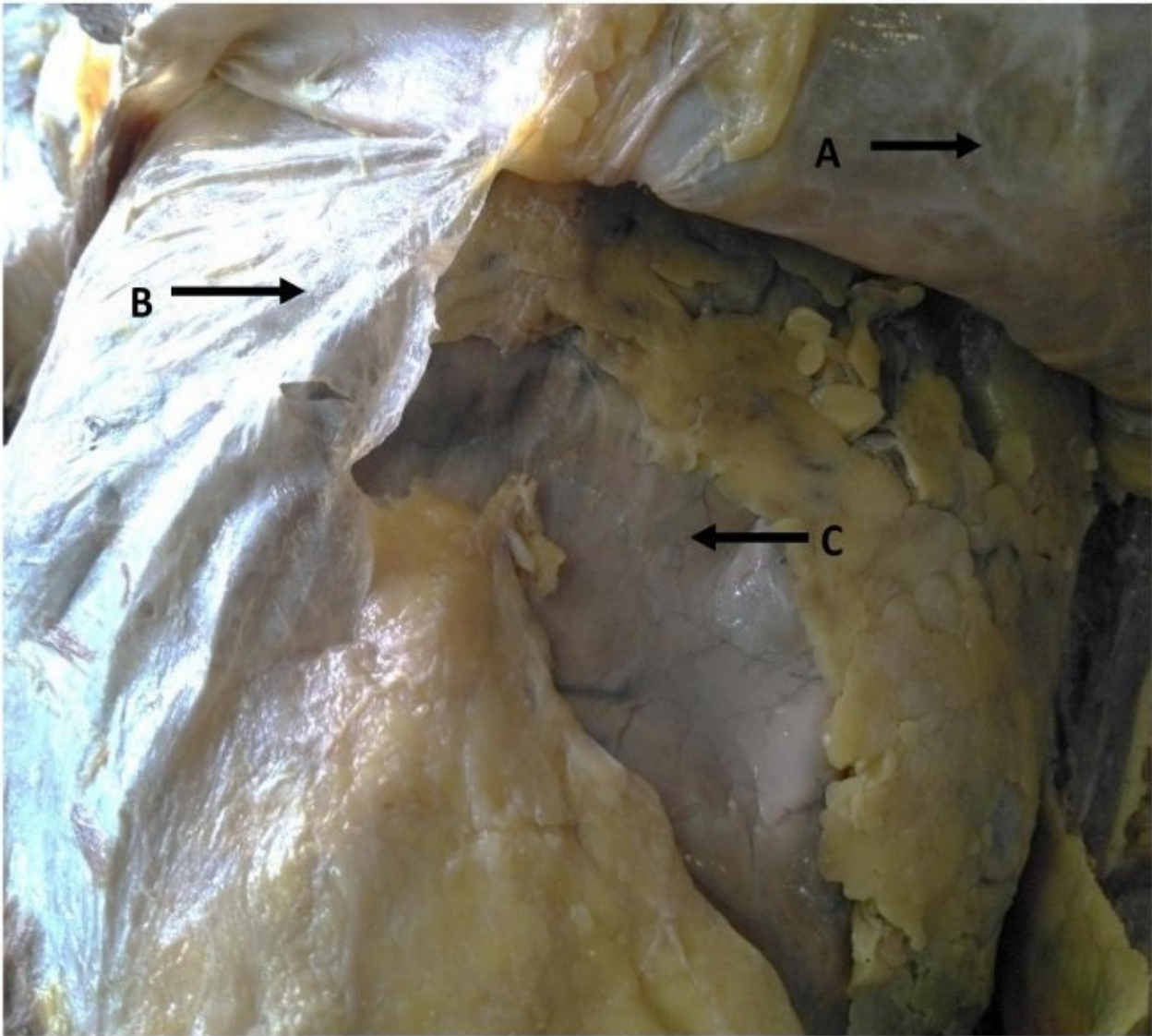
B – Corpora cavernosa

C – Deep artery of the penis

D – Urethra

E – Corpus spongiosum

Peritoneum

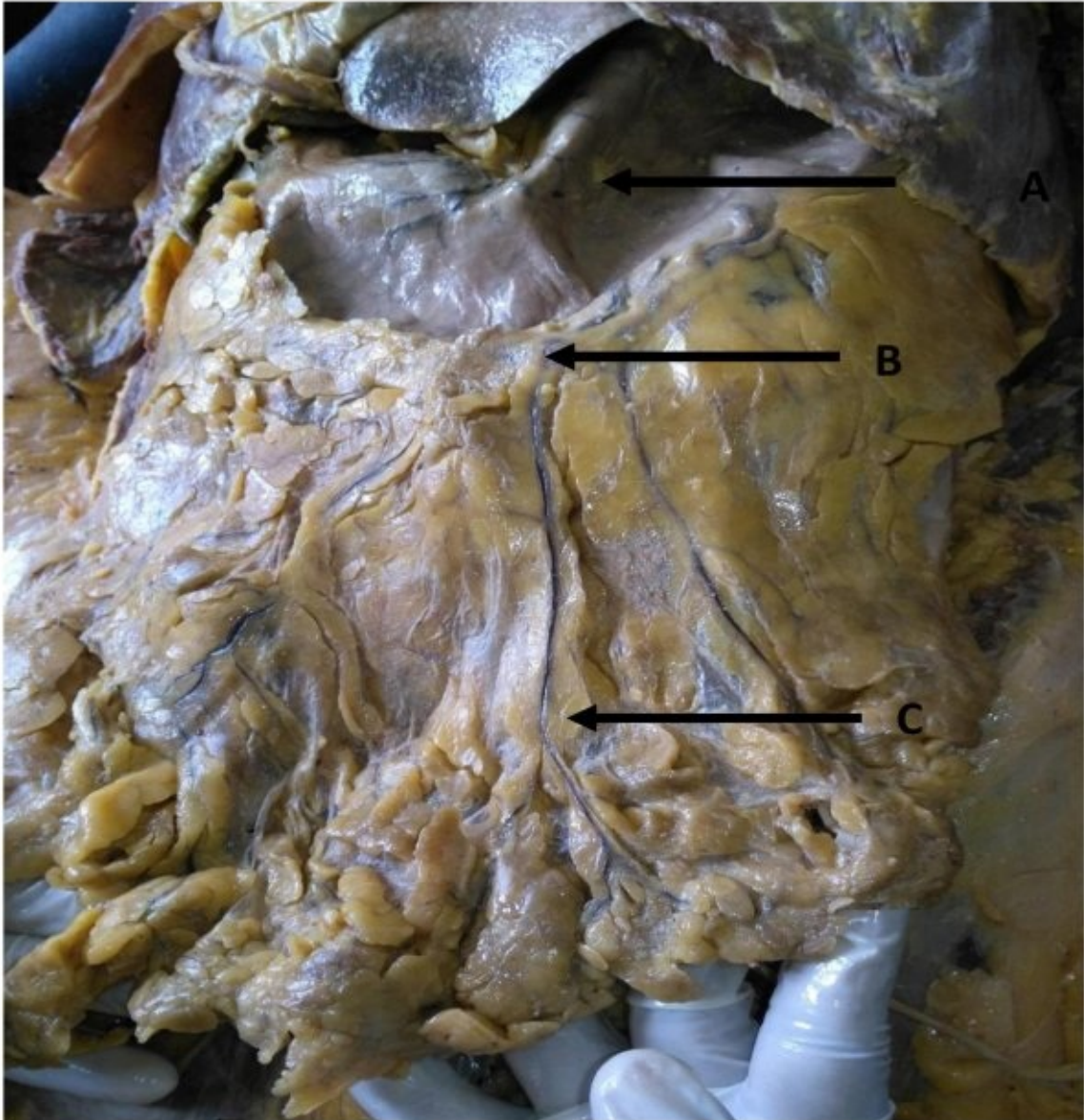


A – Reflected anterior abdominal wall

B – Parietal peritoneum

C – Visceral peritoneum

Anterior view of the abdominal viscera

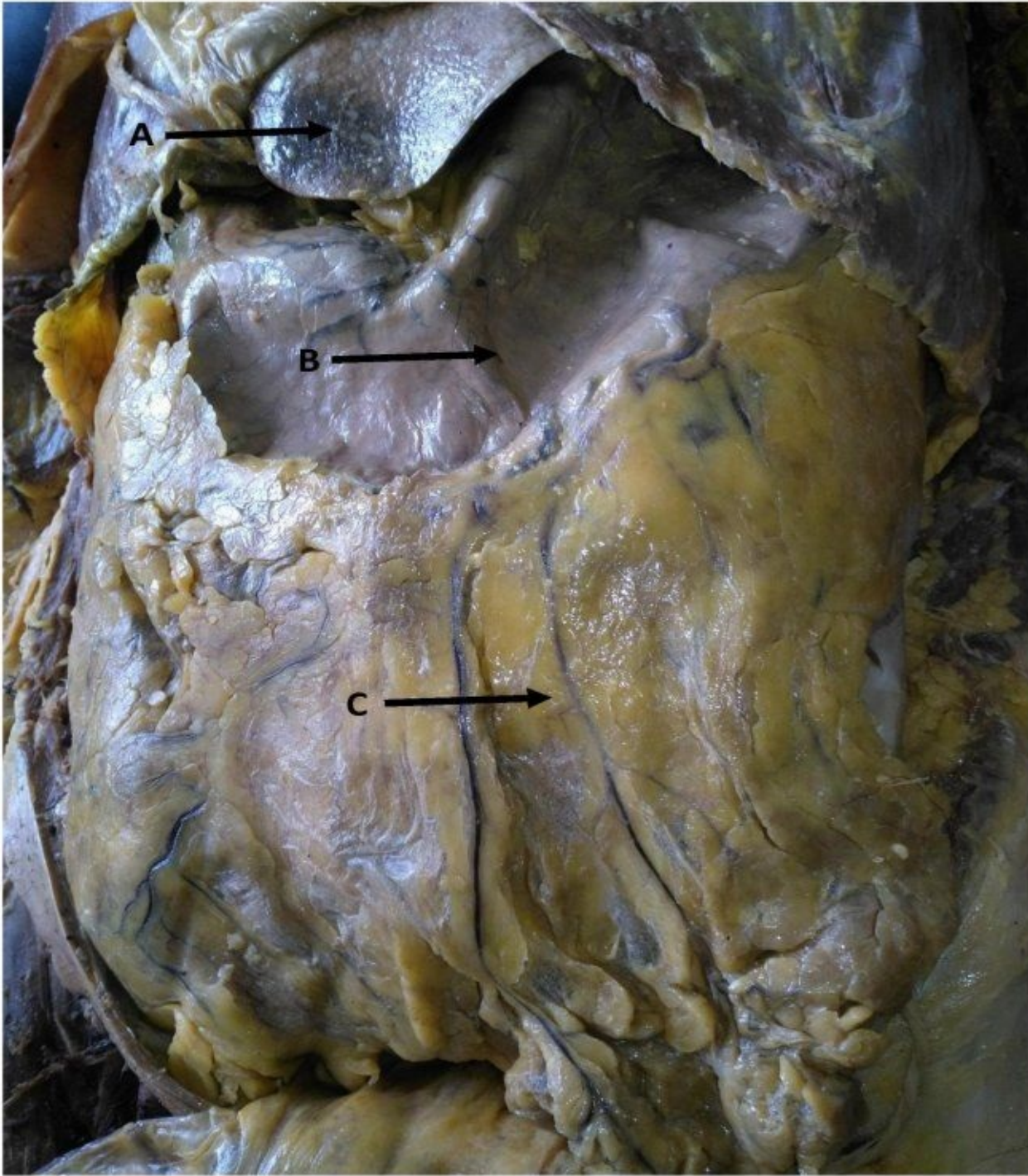


A – Stomach

B – Right gastro-epiploic arteries

C – Greater omentum

Greater omentum

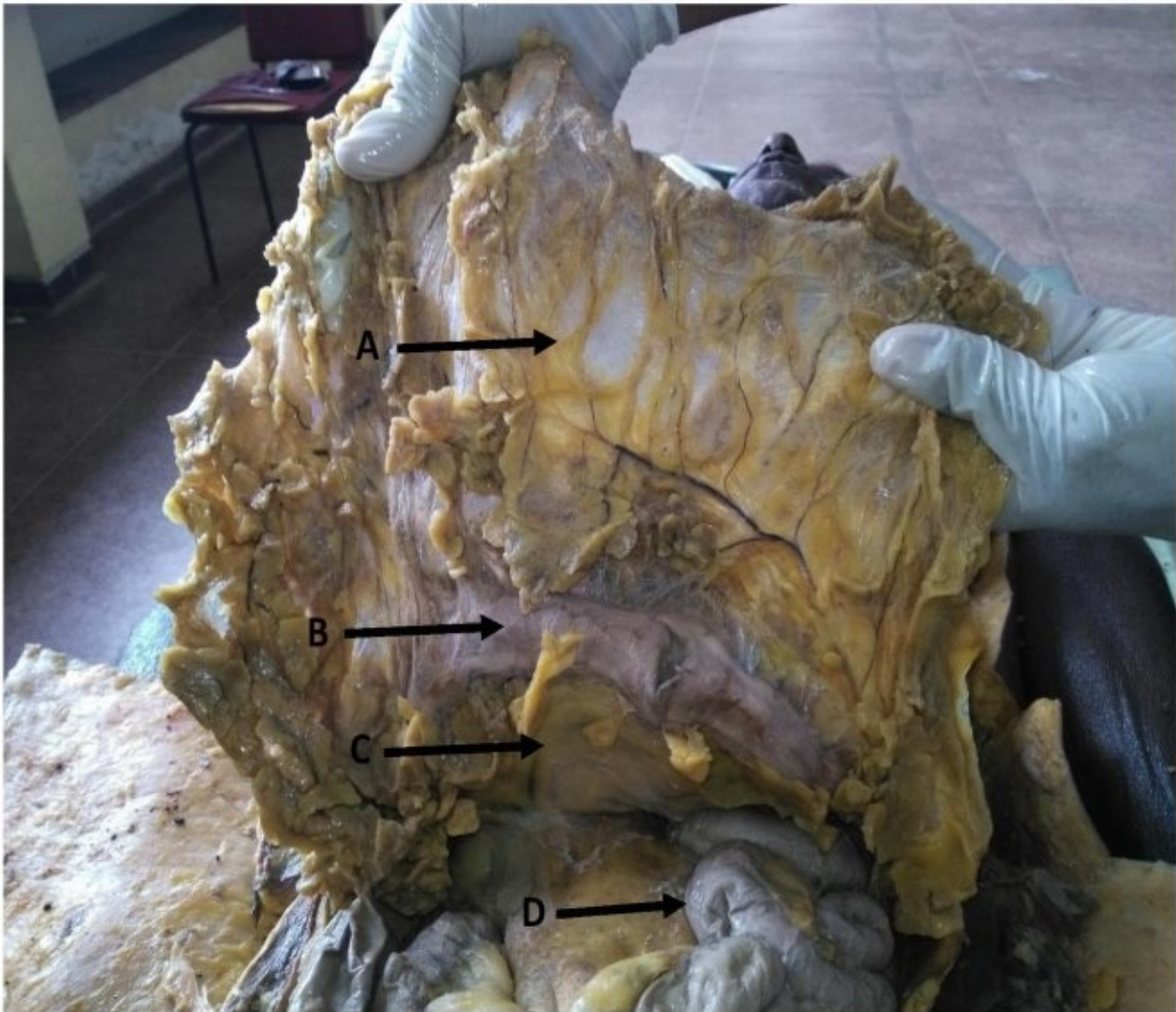


A – Liver (left lobe)

B – Stomach

C – Greater omentum

Transverse mesocolon



A – Greater omentum (reflected)

B – Transverse colon

C – Transverse mesocolon

D – Small intestine

Lesser omentum



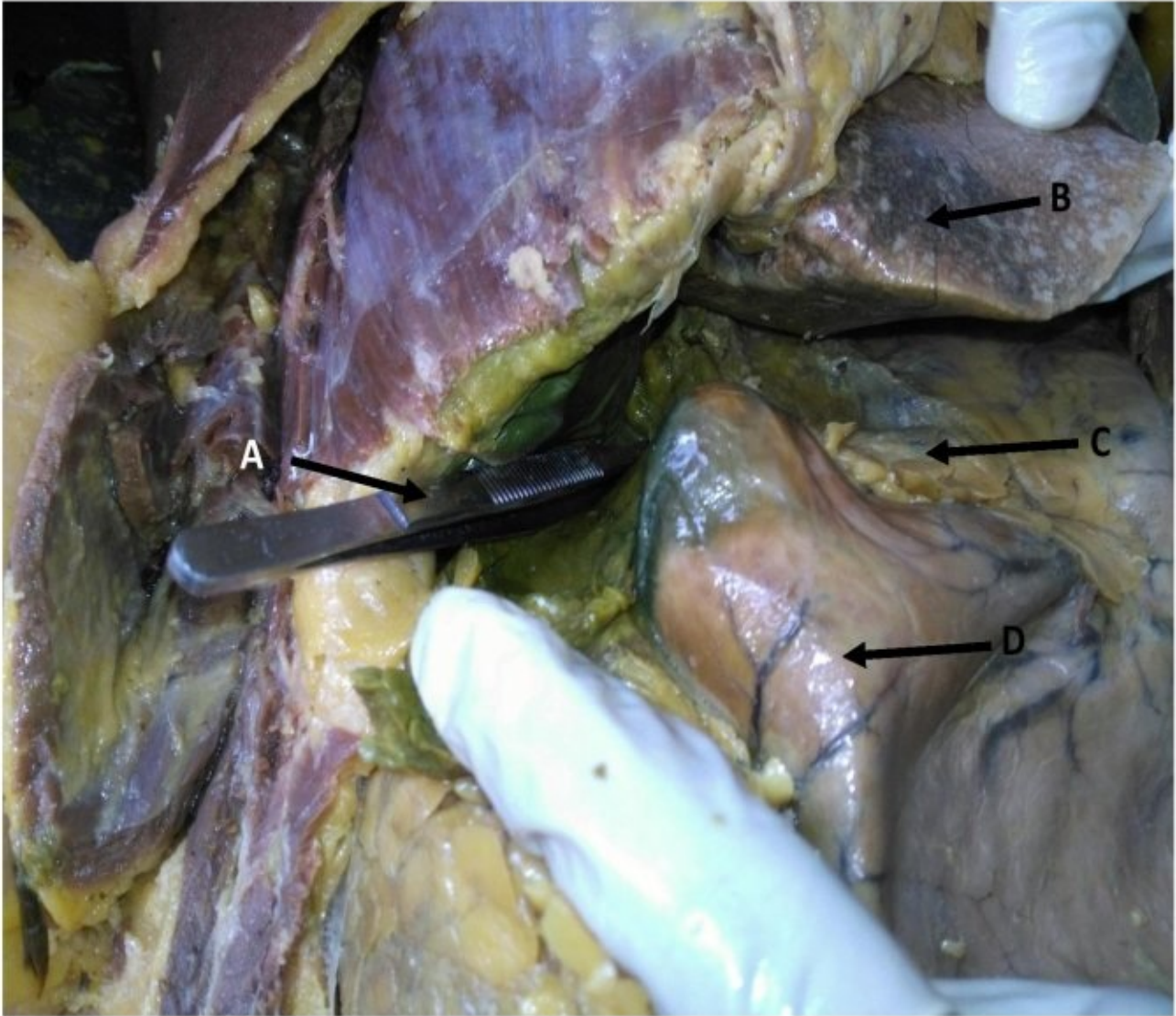
A – Liver (reflected upwards)

B – Lesser omentum

C – Stomach

D – Greater omentum with gastroepiploic vessels

Epiploic foramen



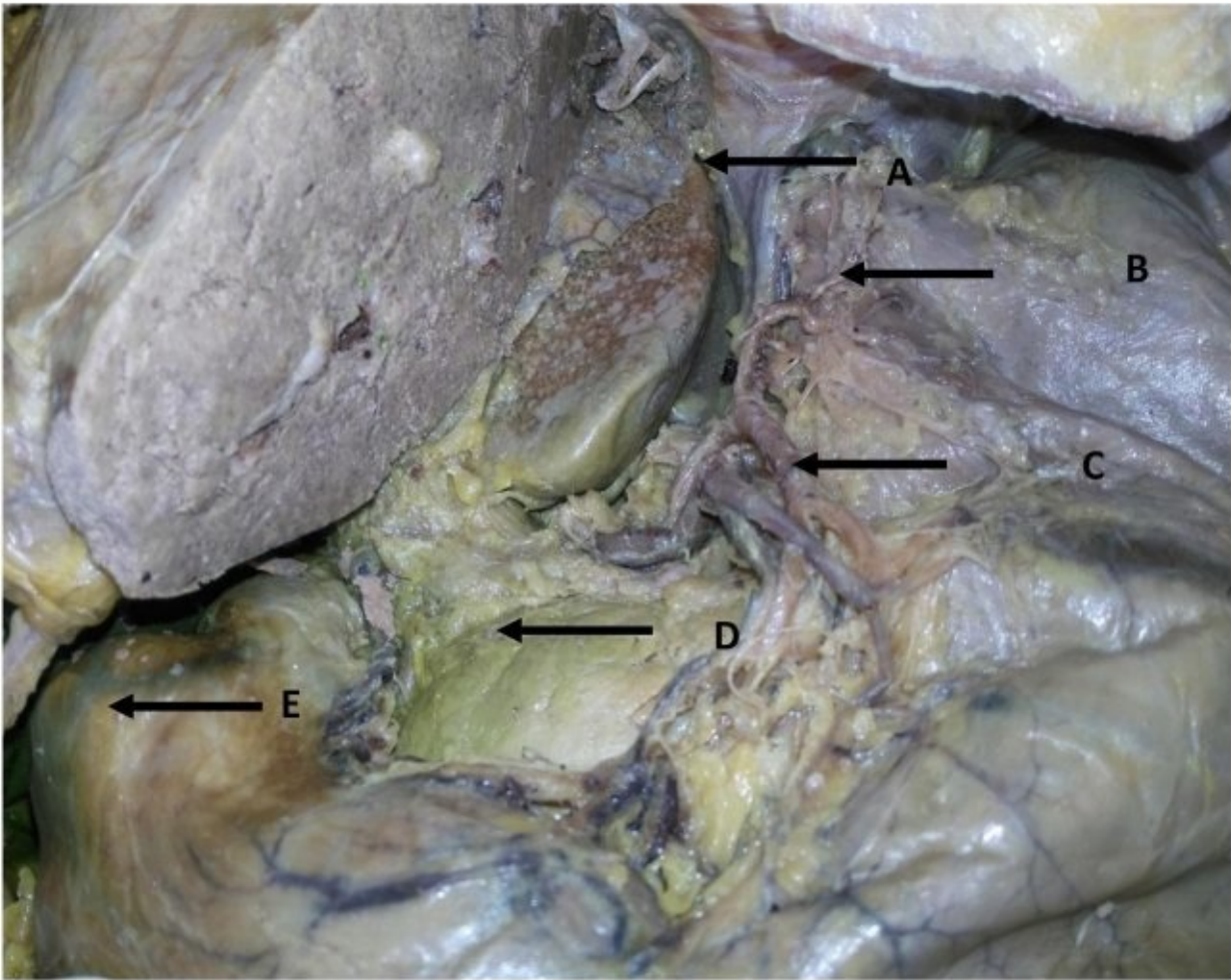
A – Probe in the epiploic foramen

B – Liver (left lobe)

C – Lesser omentum

D – Stomach

Posterior wall of the omental bursa



A – Lesser omentum (cut edge)

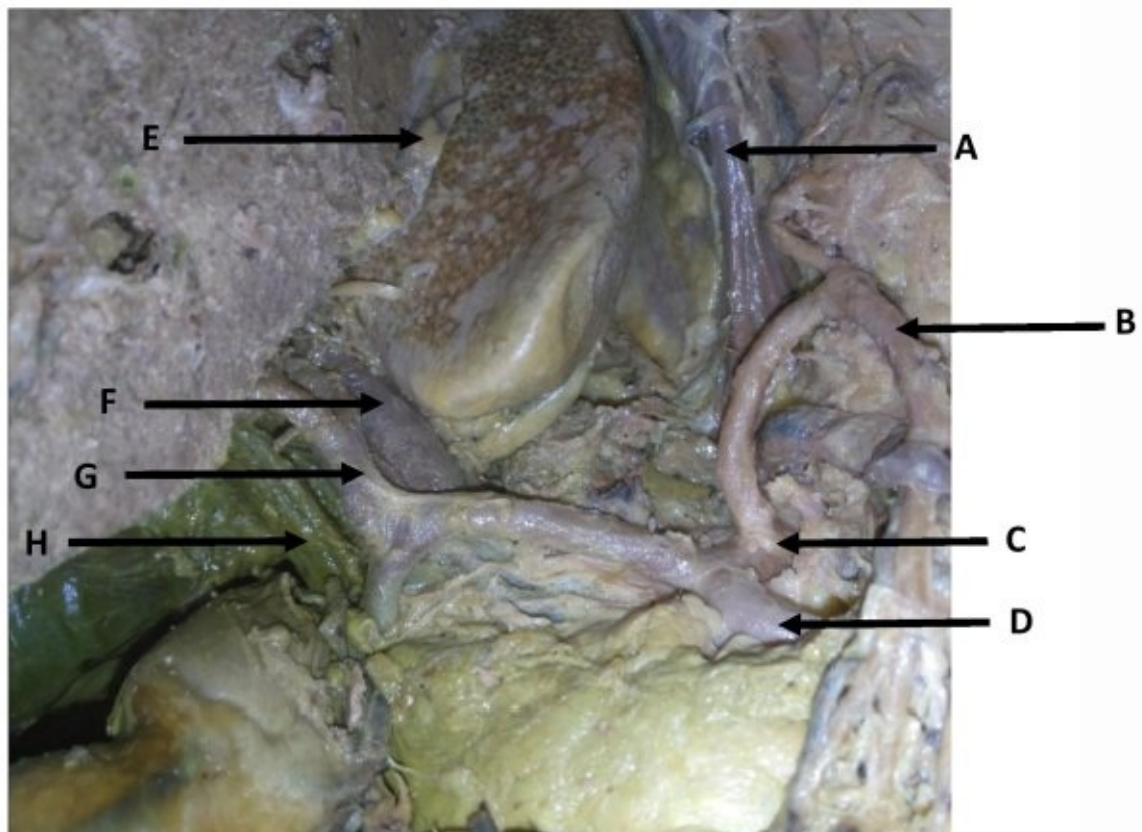
B – Oesophageal branch of the left gastric artery

C – Left gastric artery

D – Pancreas

E – Duodenum (first part)

Porta hepatis



A – Left crus of the diaphragm

B – Left gastric artery

C – Coeliac trunk

D – Splenic artery

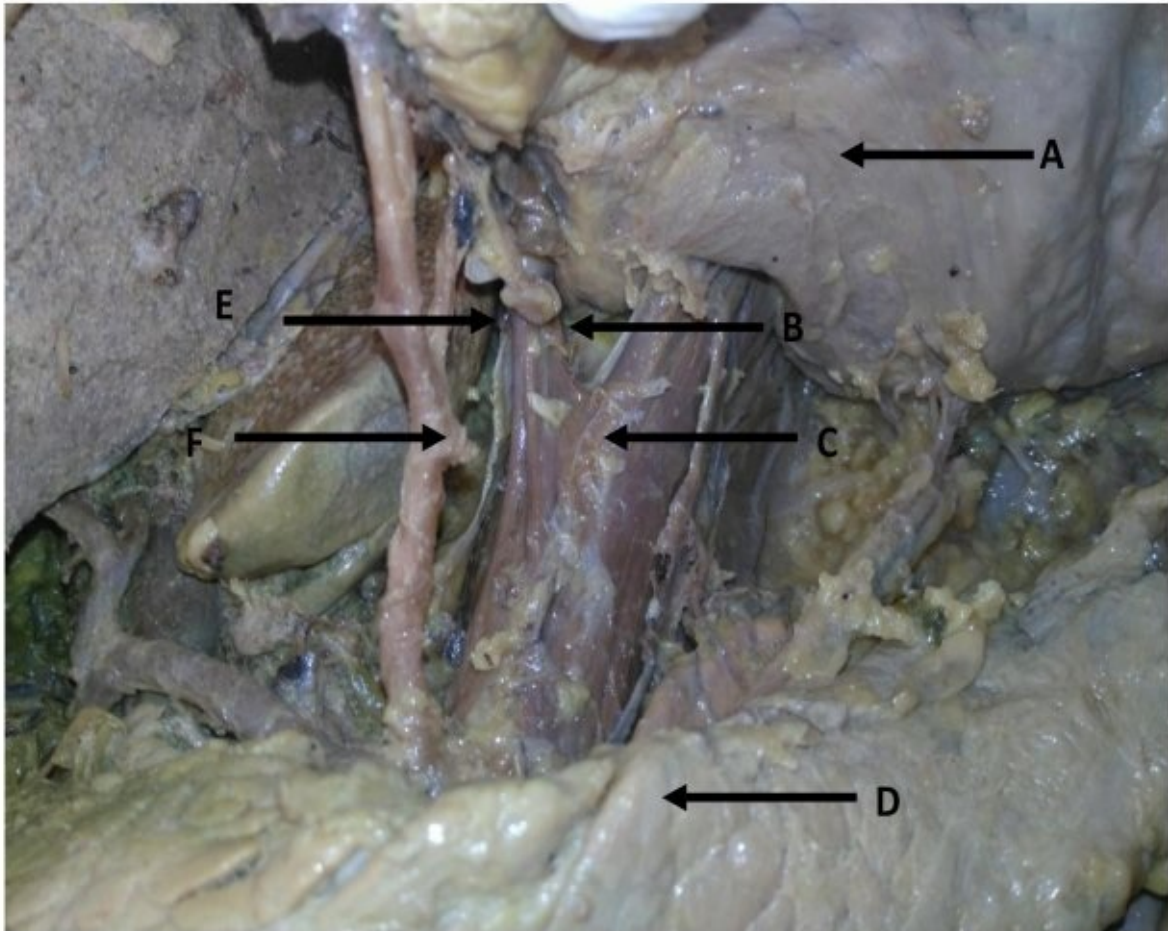
E – Falciform ligament (cut edge)

F – Portal vein

G – Common hepatic artery

H – Bile duct

Inferior view of the diaphragm



A – Stomach (pulled up)

B – Left crus of the diaphragm

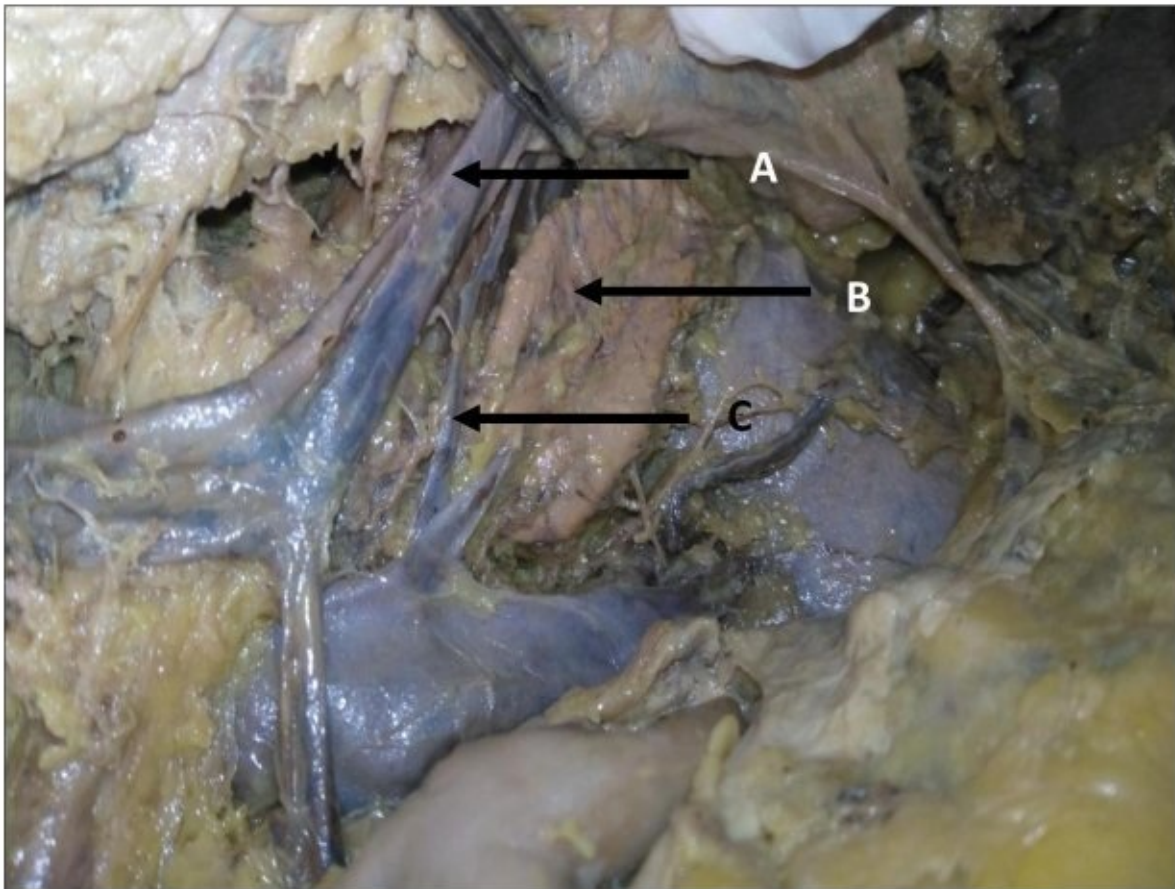
C – Inferior phrenic artery

D – Pancreas

E – Oesophageal opening of the diaphragm

F – Right crus of the diaphragm

Suprarenal gland

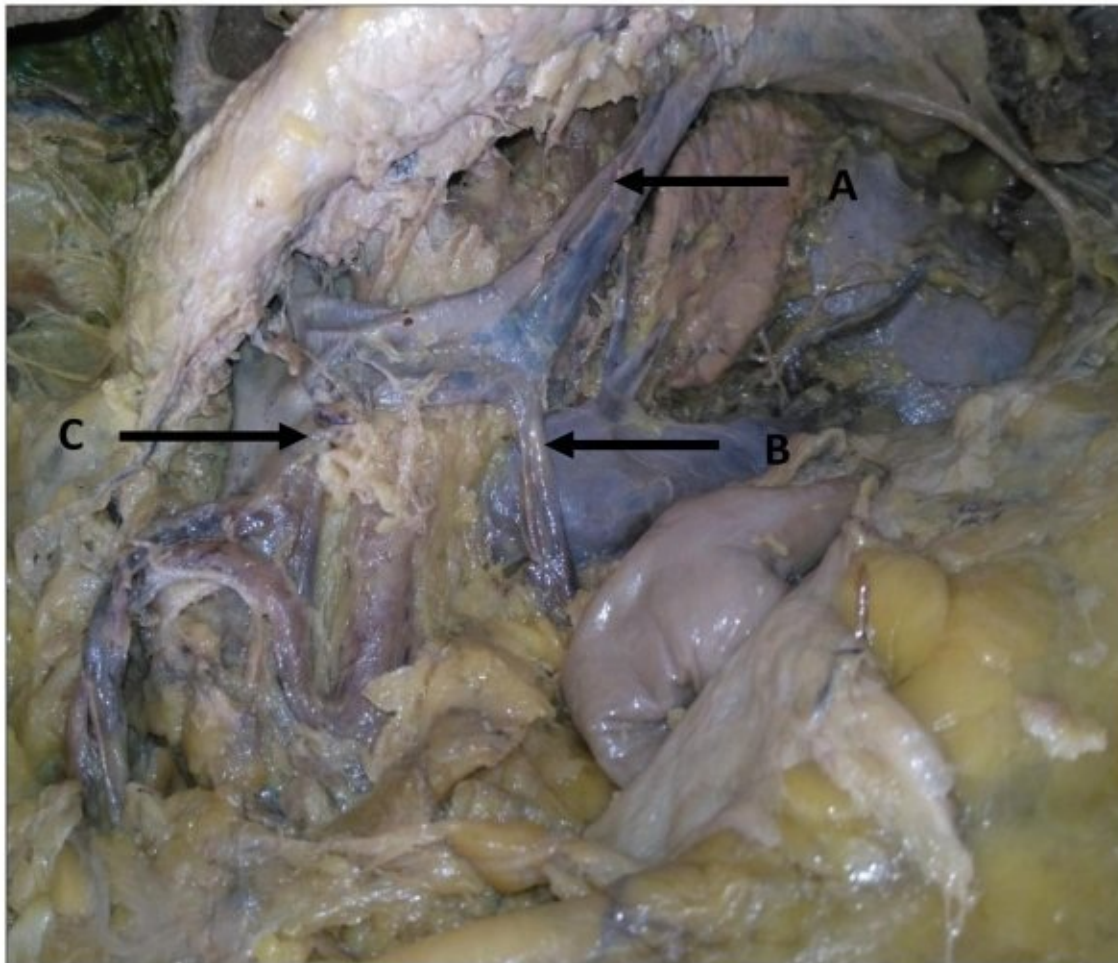


A – Splenic vein

B – Suprarenal gland

C – Suprarenal vein

Portal venous system

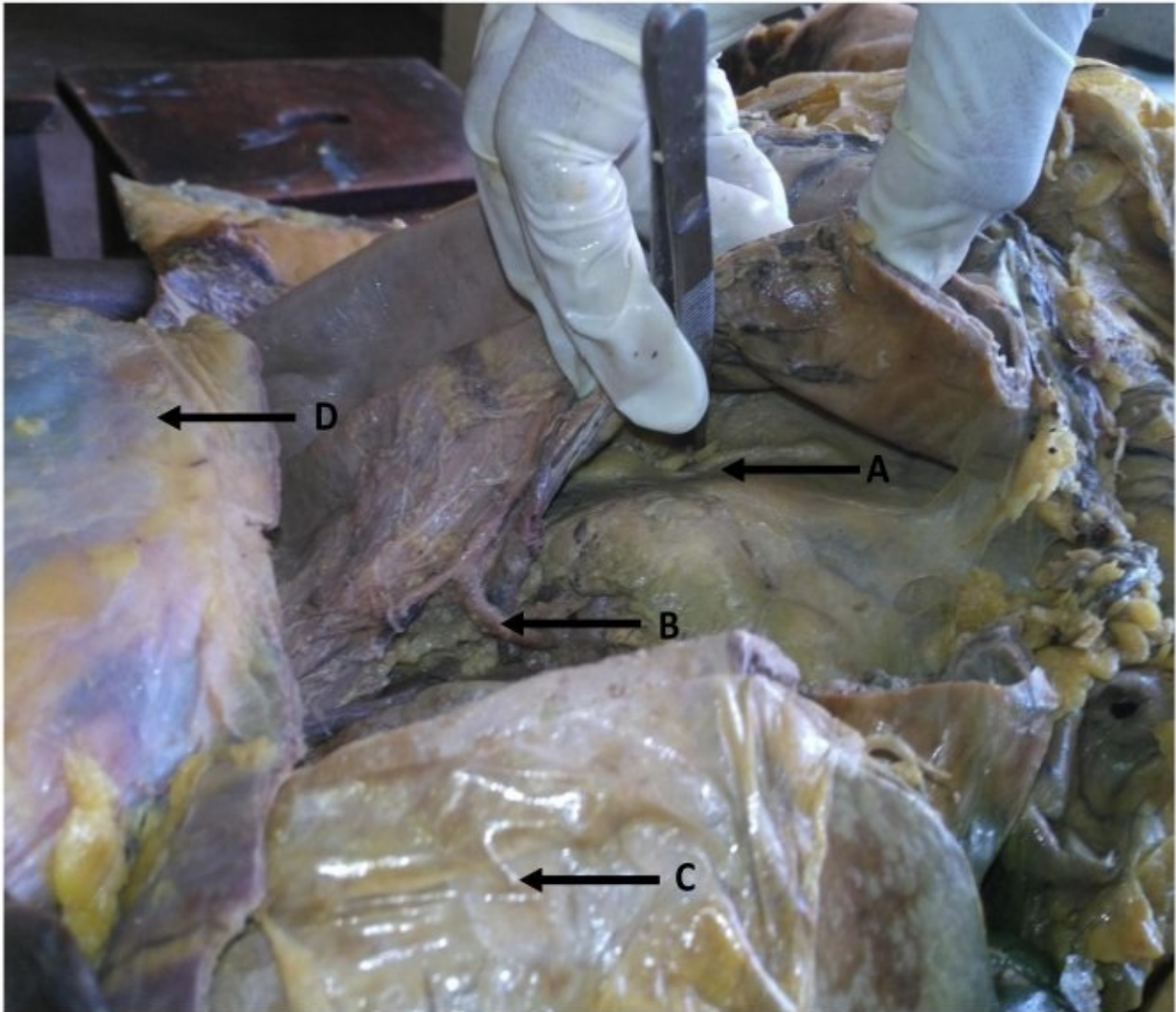


A – Splenic vein

B – Inferior mesenteric vein

C – Superior mesenteric vein

Stomach bed



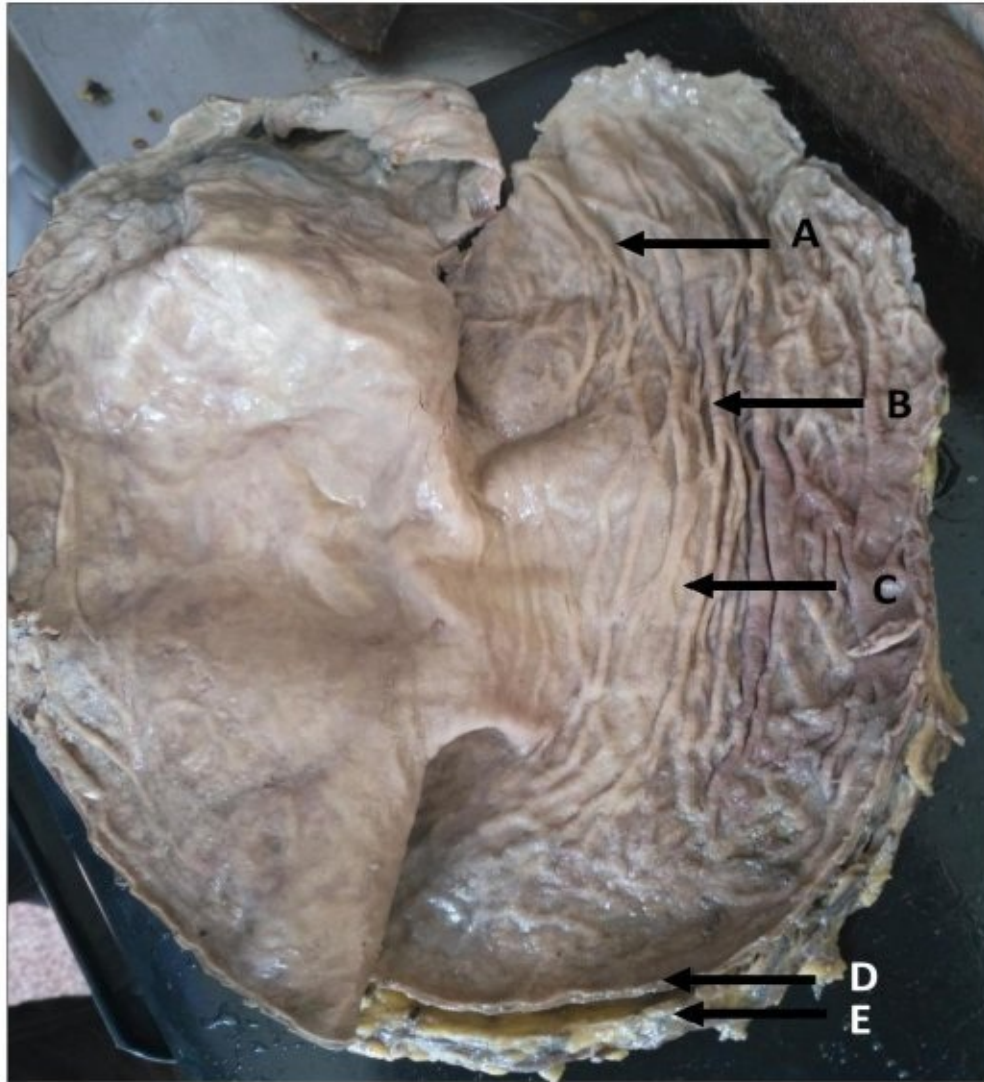
A – Lesser sac

B – Left gastric artery

C – Liver with falciform ligament

D – Diaphragm

Interior view of the stomach



A – Fundus of the stomach

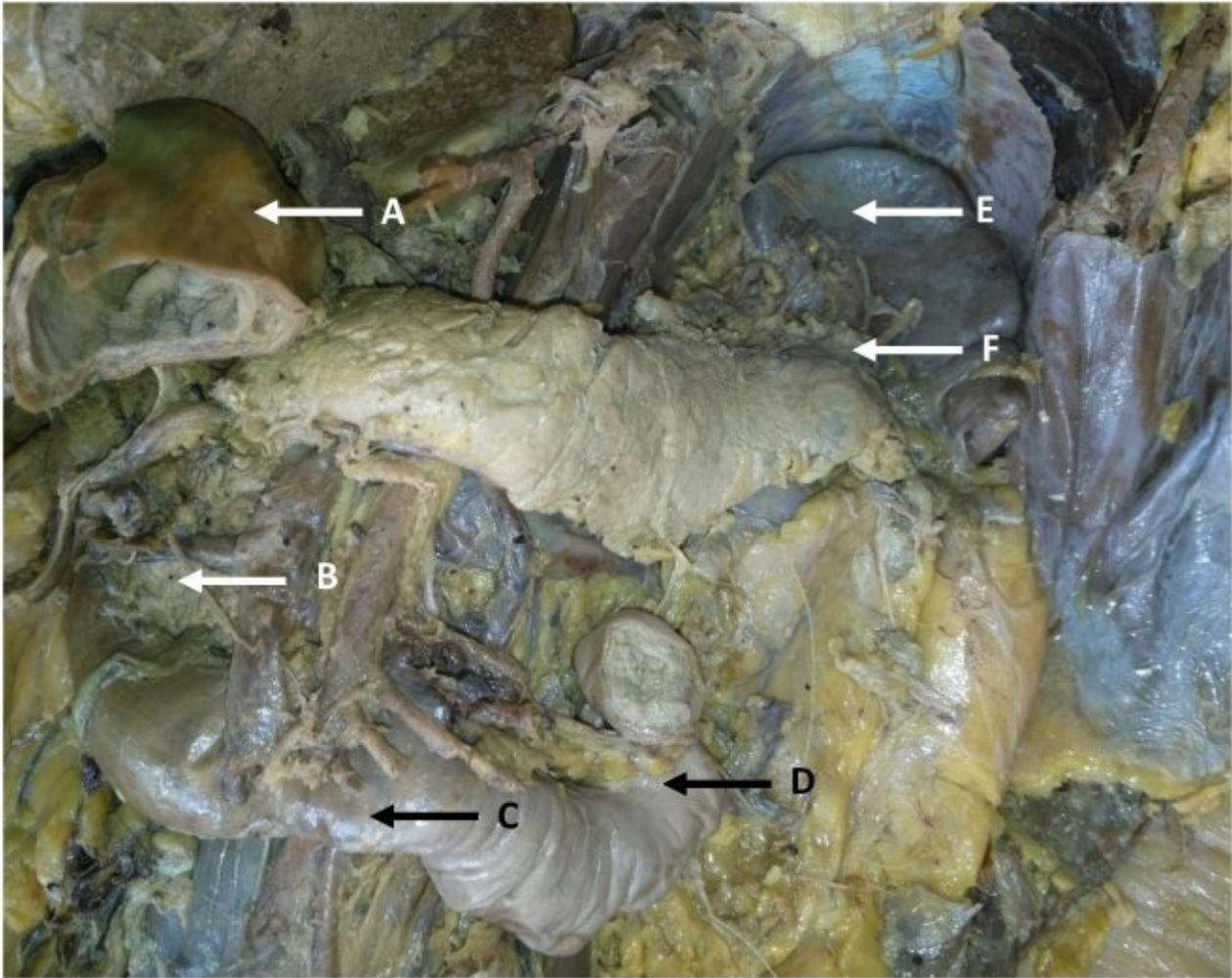
B – Longitudinal folds

C – Body of the stomach

D – Mucous membrane

E – Muscular layer

Duodenum



A – First part of the duodenum

B – Second part of the duodenum

C – Third part of the duodenum

D – Fourth part of the duodenum

E – Spleen

F – Tail of the pancreas

Duodenum

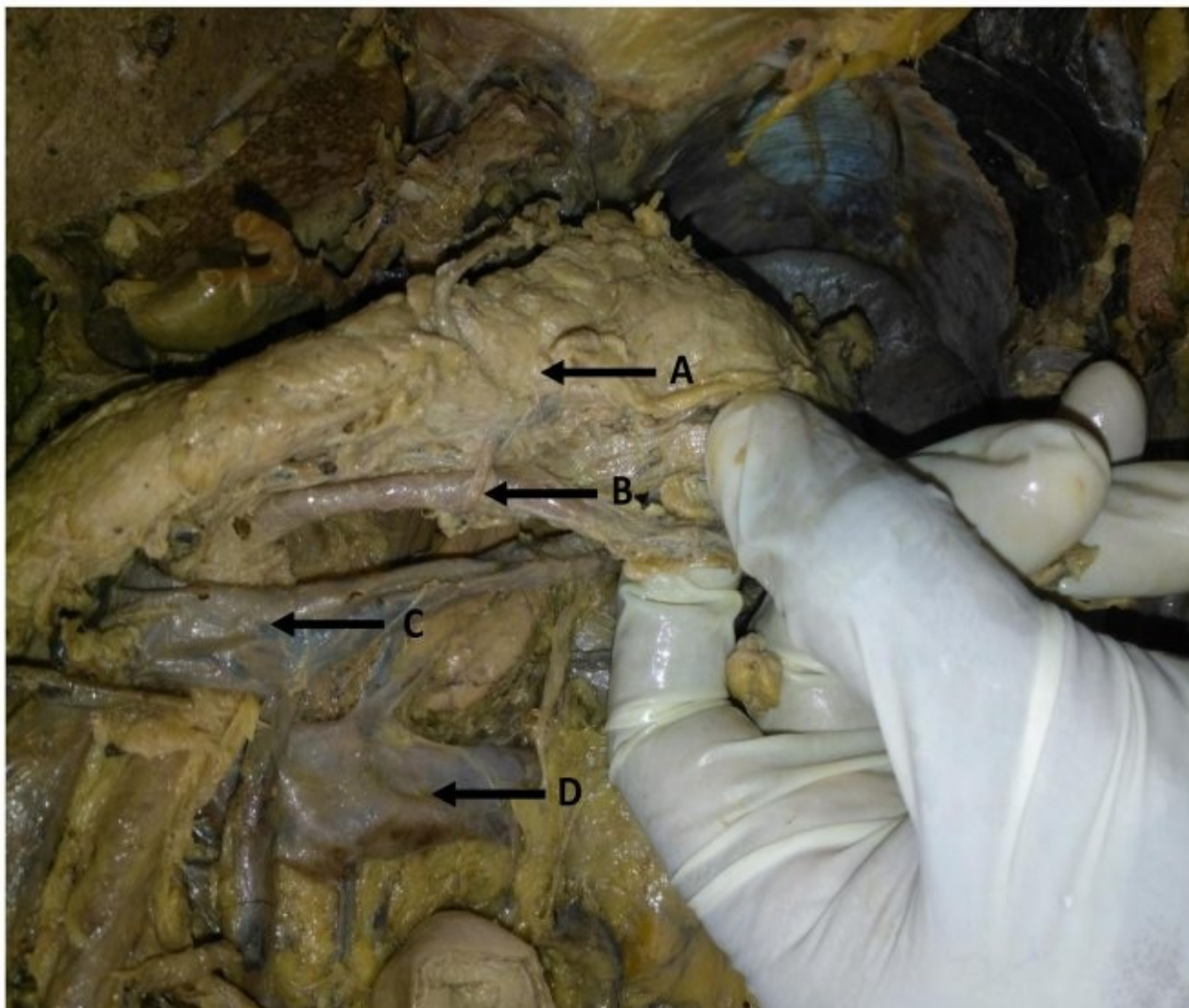


A – First part of the duodenum

B – Major duodenal papillae

C – Liver

Pancreas



A – Pancreas

B – Splenic artery

C – Splenic vein

D – Renal vein

Posterior aspect of the pancreas

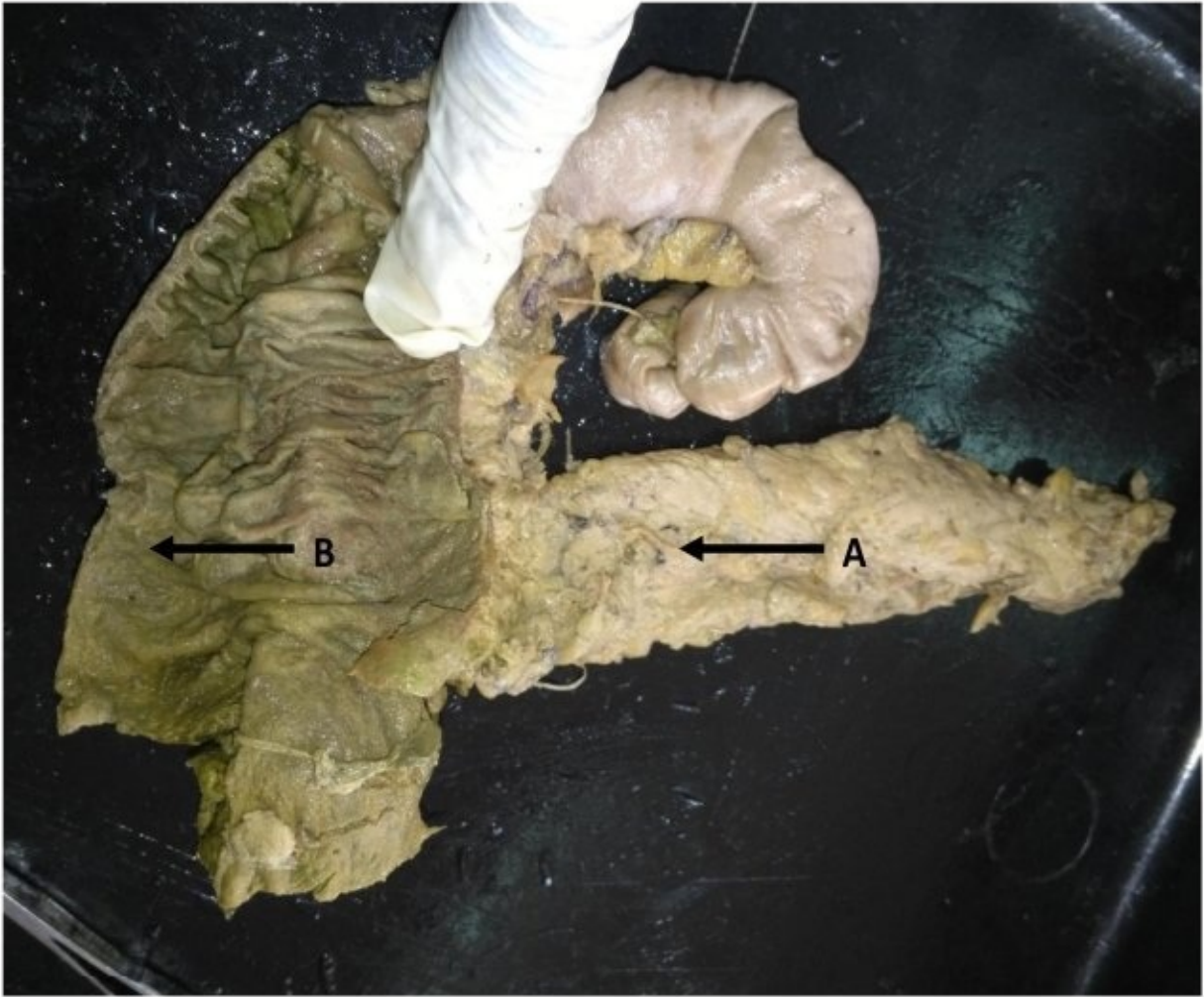


A – Pancreas (lifted upwards)

B – Splenic vein

C – Inferior mesenteric vein

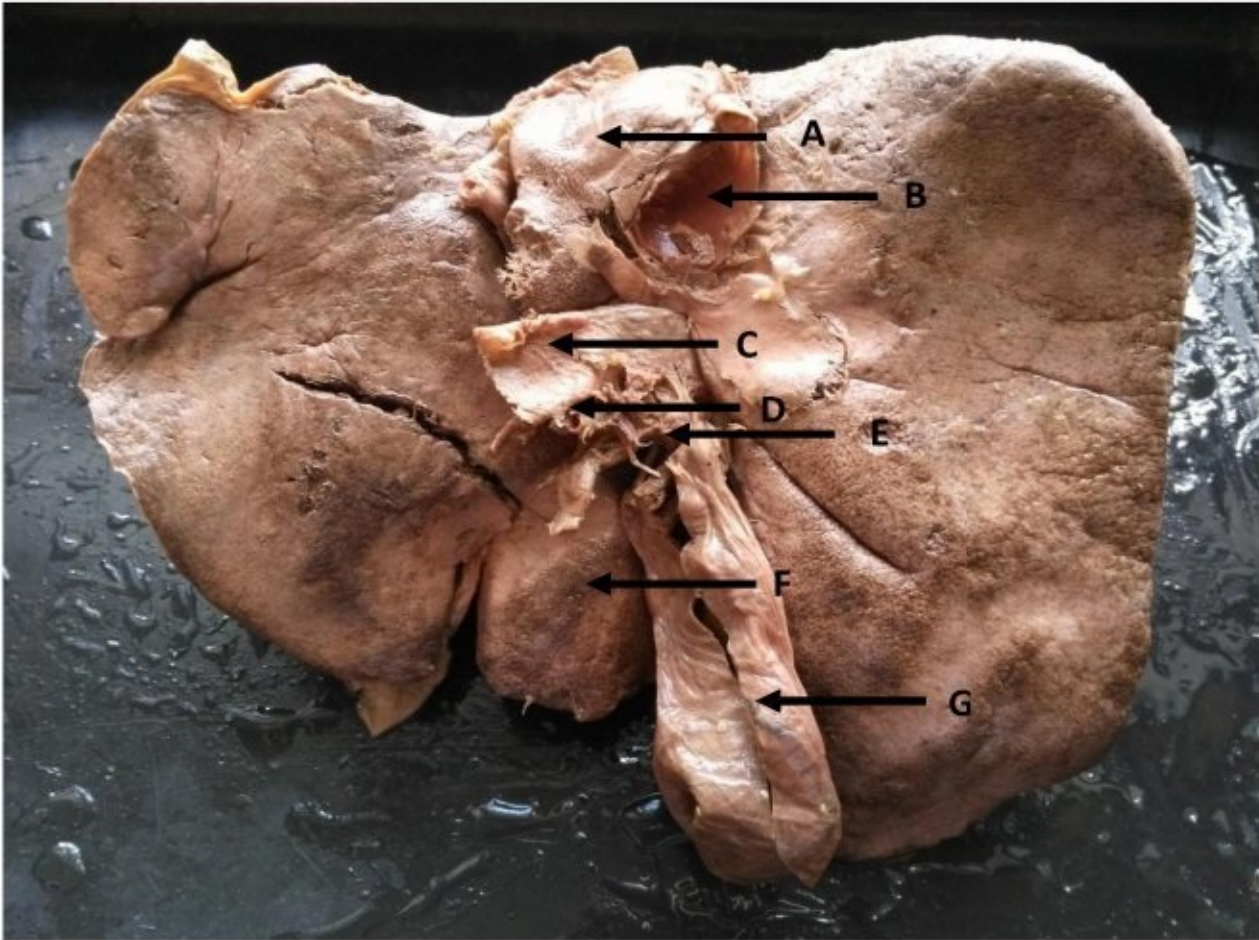
Pancreas



A – Pancreas

B – Greater duodenal papillae

Liver



A – Caudate lobe

B – Inferior vena cava

C – Portal vein

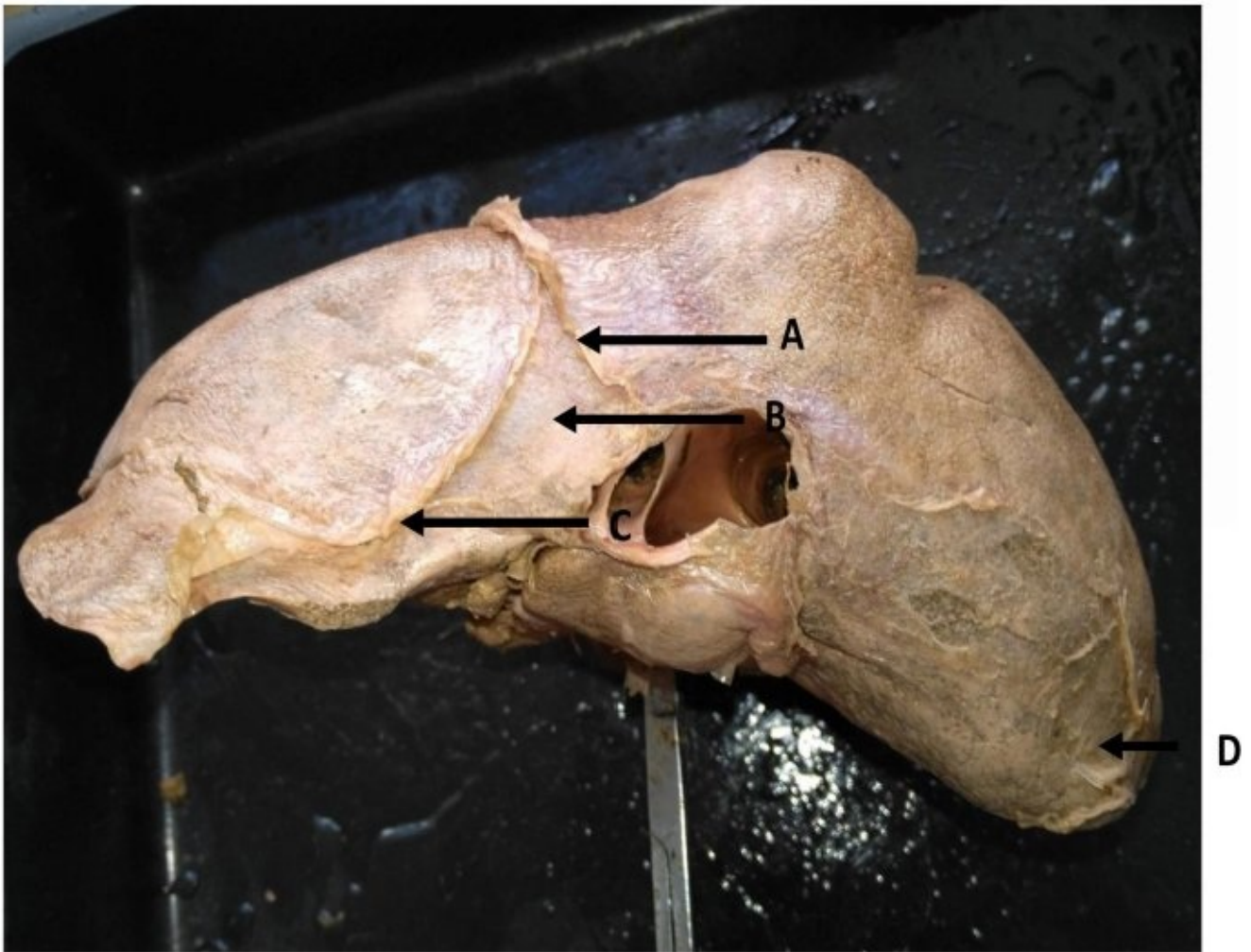
D – Hepatic artery

E – Bile duct

F – Quadrate lobe

G – Gallbladder

Liver



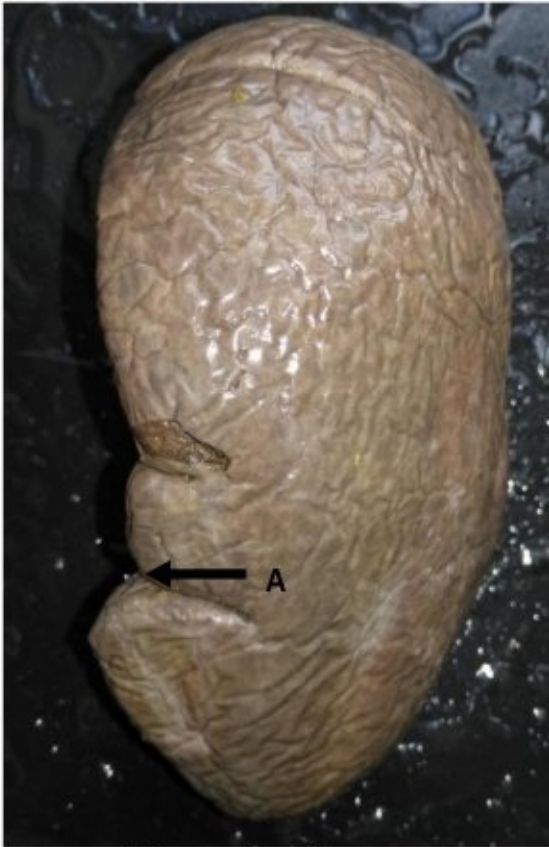
A – Coronary ligament

B – Bare area of the liver

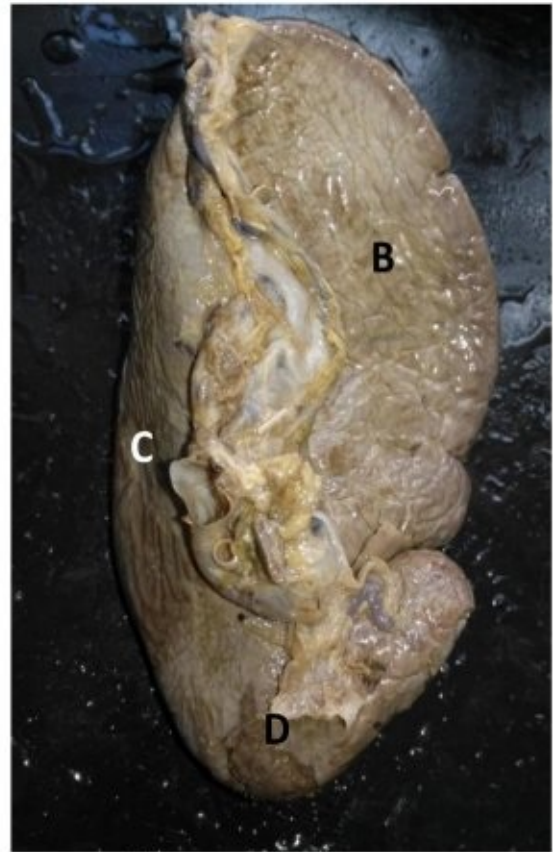
C – Left triangular ligament

D – Right triangular ligament

Spleen



External surface



Visceral surface

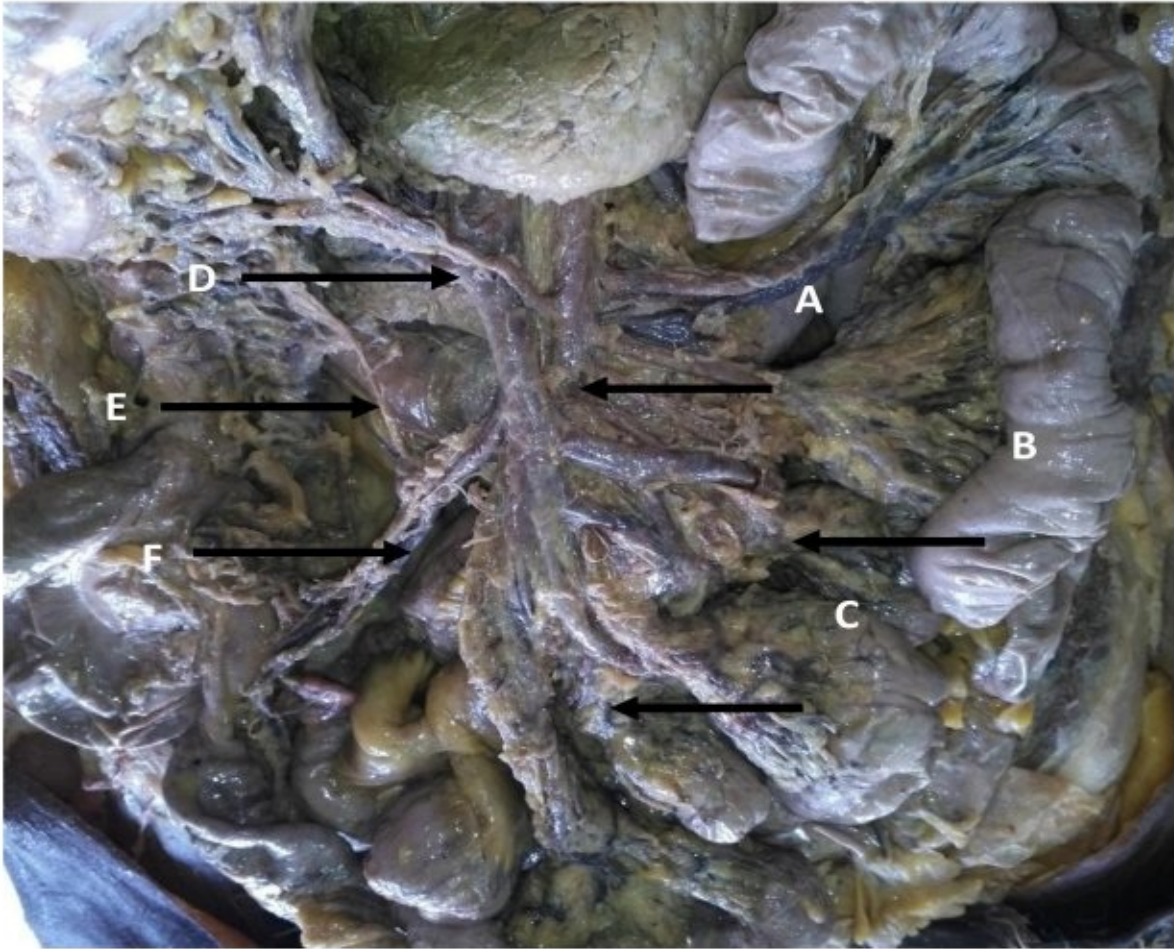
A – Notch of the spleen

B – Gastric area

C – Renal area

D – Colic area

Superior mesenteric artery



A – Superior mesenteric artery

B – Jejunal branches

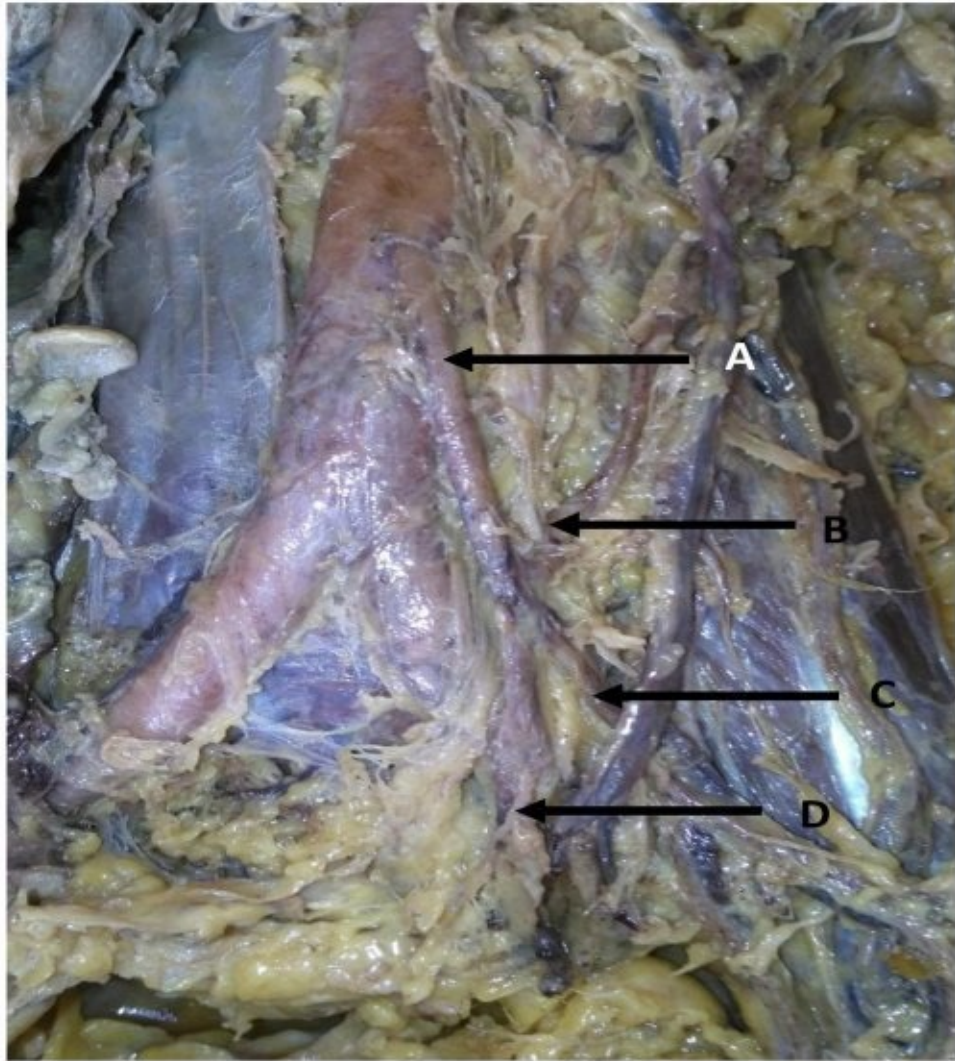
C – Ileal branches

D – Middle colic artery

E – Right colic artery

F – Ileocolic artery

Inferior mesenteric artery



A – Inferior mesenteric artery

B – Left colic artery

C – Sigmoidal artery

D – Superior rectal artery

Jejunum and Ileum



Jejunum

Longer vascular arcades

Less fat

Greater diameter



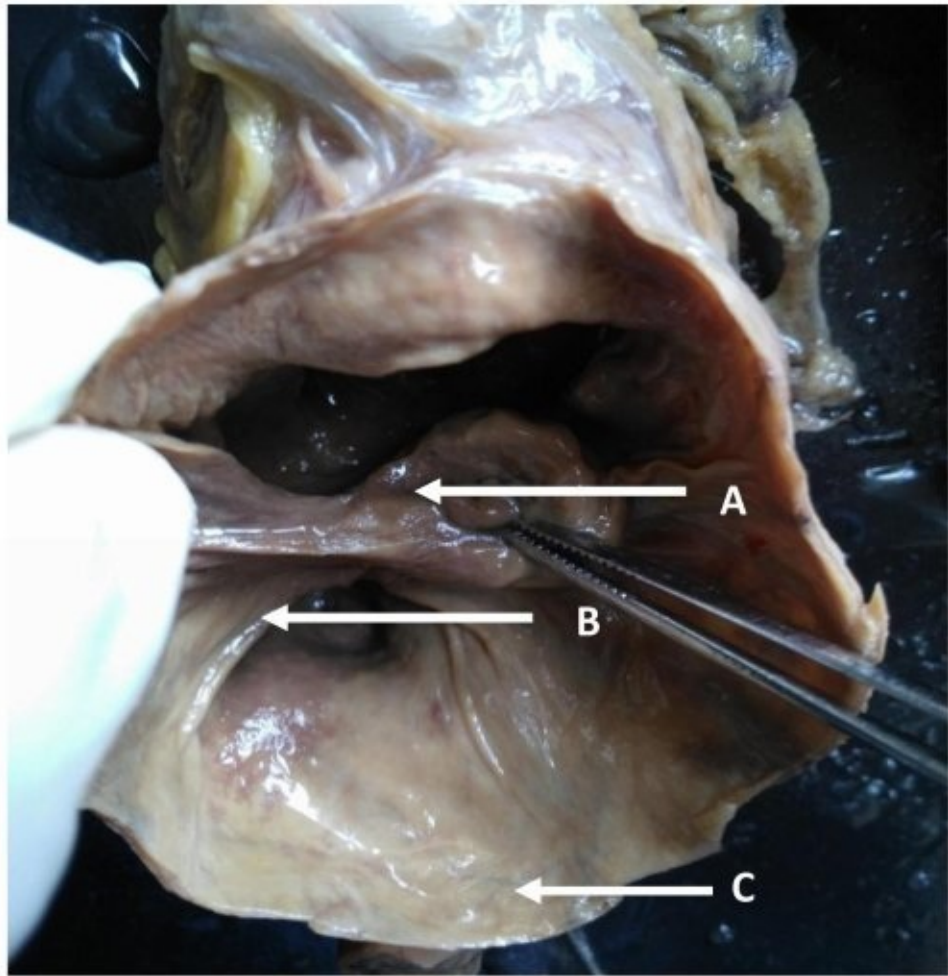
Ileum

Shorter vascular arcades

More fat

Lesser diameter

Caecum



A – Orifice of the ileum

B – Orifice of the appendix

C – Caecum (cut open)

Caecum

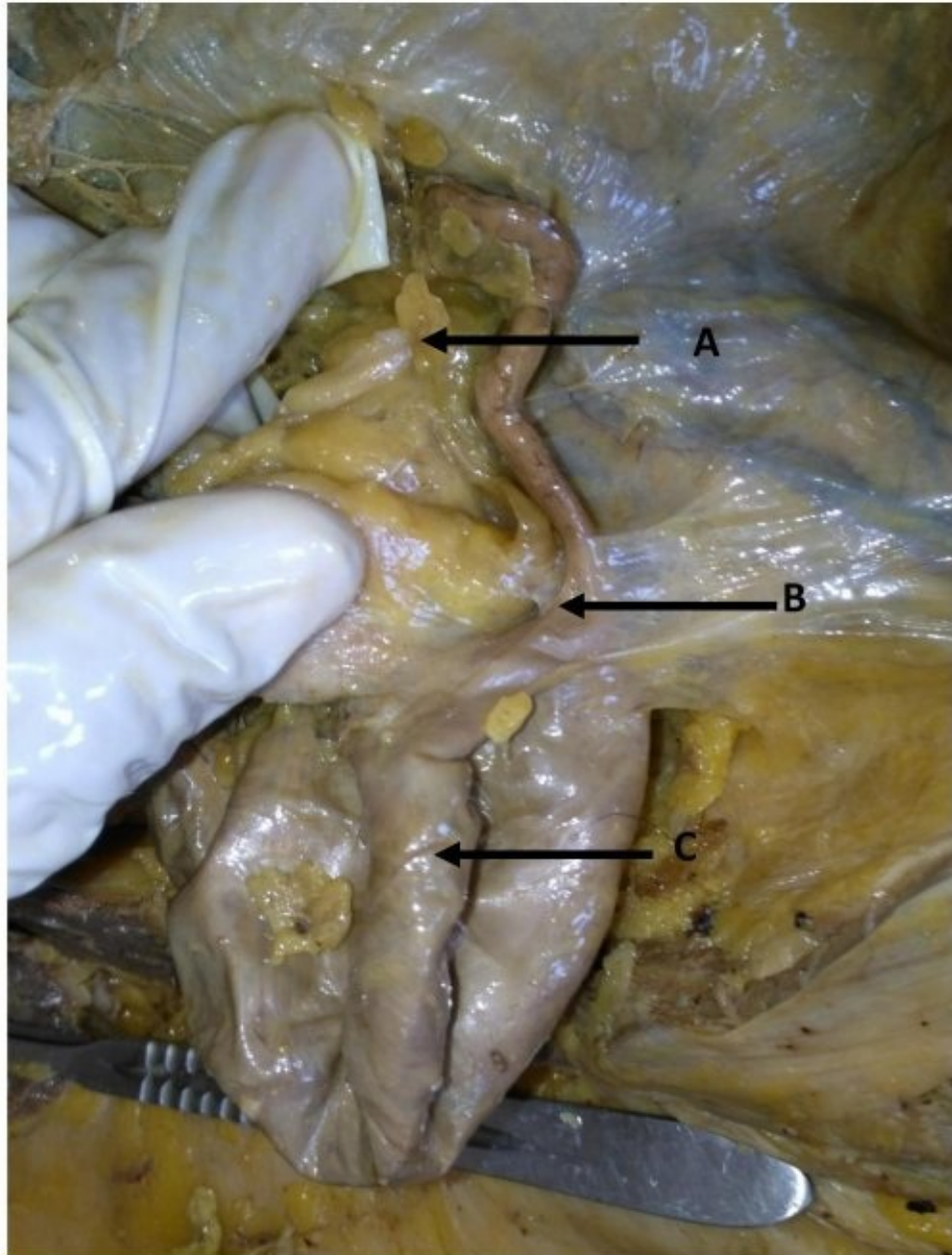


A – Caecum (turned upwards)

B – Probe in the retro-cecal space

C – Anterior superior iliac spine

Appendix



A – Appendix

B – Meso appendix

C – Caecum

Interior of the Jejunum and Ileum



Jejunum

Larger circular folds

Larger villi

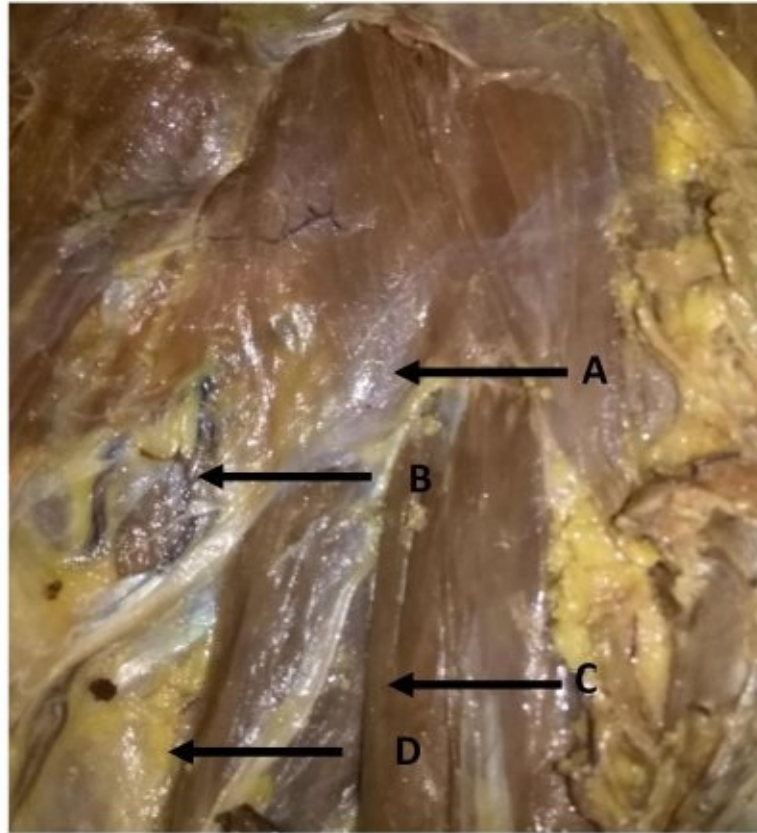


Ileum

Smaller circular folds

Smaller villi

Abdominal surface of the diaphragm



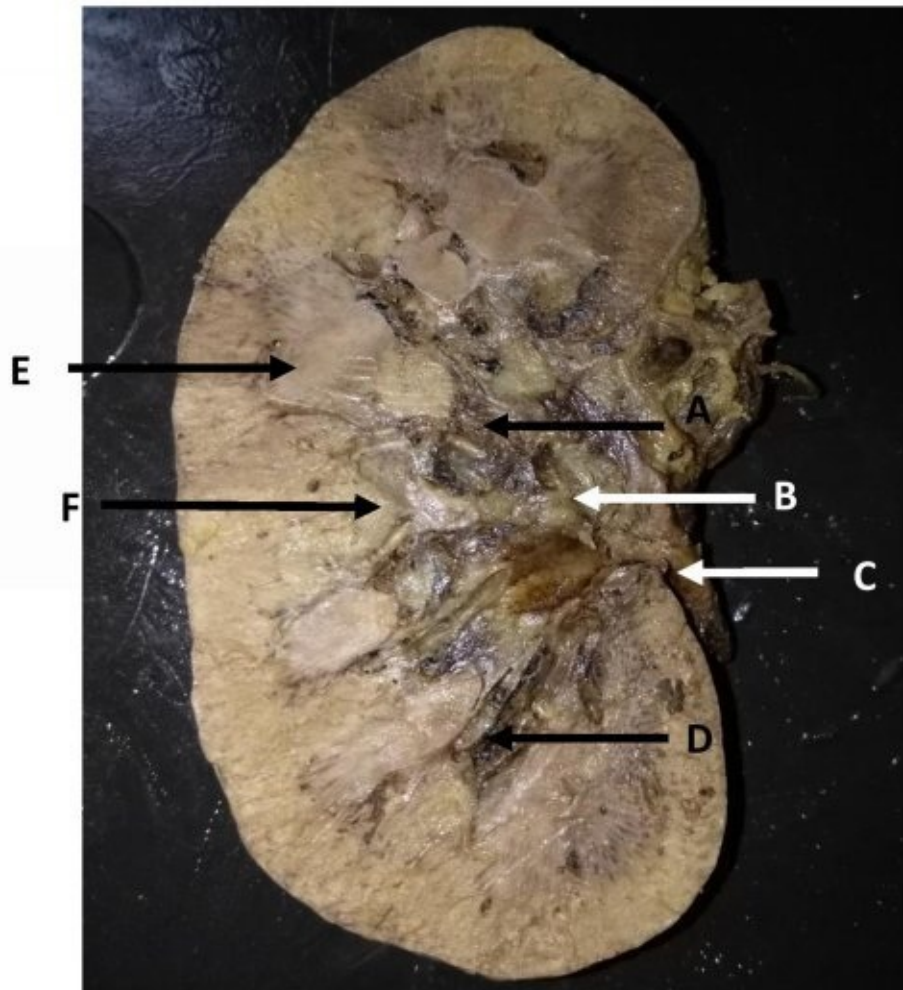
A – Medial arcuate ligament

B – Lateral arcuate ligament

C – Psoas major

D – Quadratus lumborum

Kidney (coronal section)



A – Major calyx

B – Renal pelvis

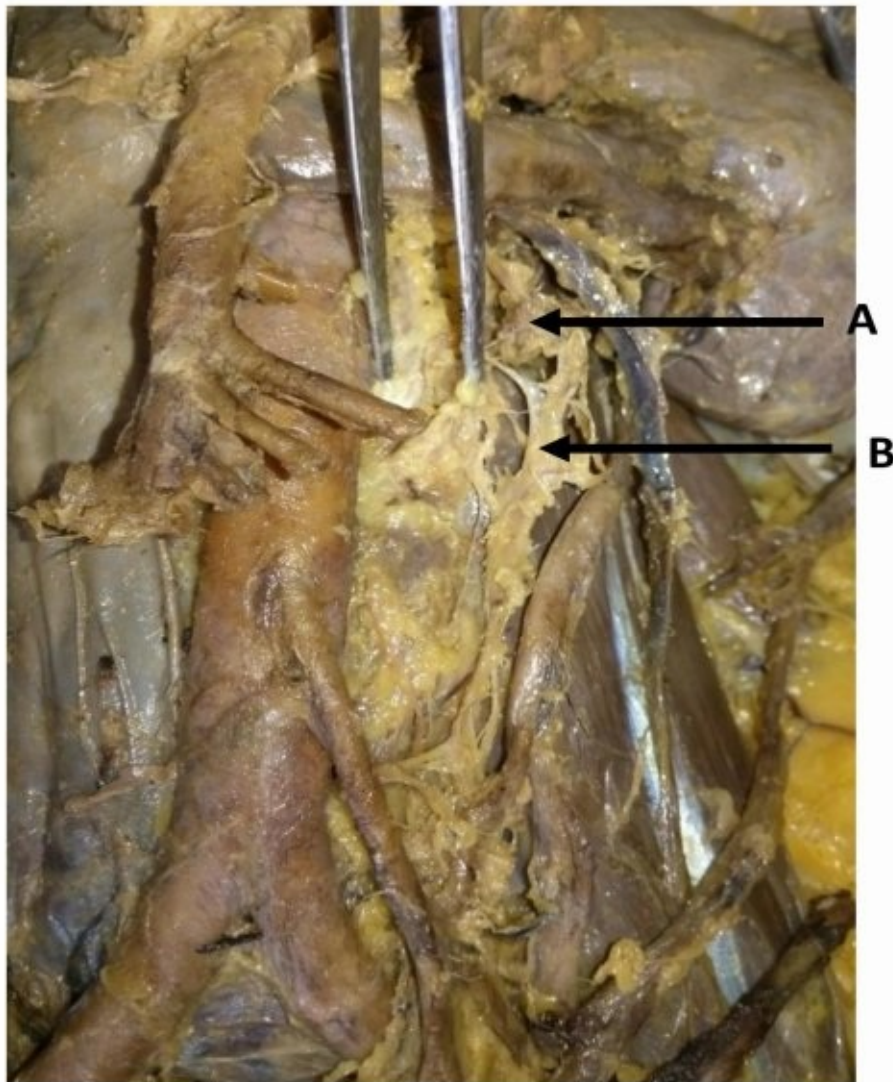
C – Ureter

D – Minor calyx

E – Renal pyramids

F – Papilla

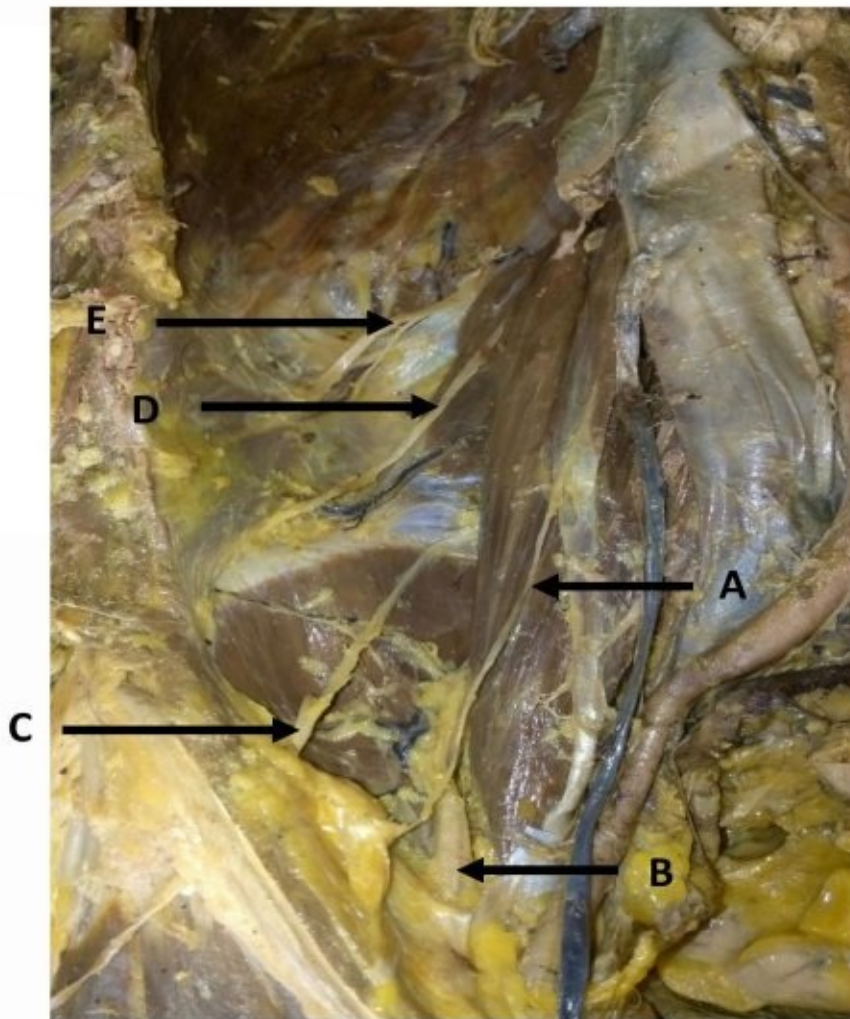
Autonomic nervous system



A – Sympathetic ganglion

B – Sympathetic trunk

Lumbar plexus



A – Genitofemoral nerve

B – Femoral nerve

C – Lateral cutaneous nerve of the thigh

D – Ilioinguinal nerve

E – Iliohypogastric nerve