

# Spinal Cord and Meninges Laboratory Objectives

Medical Neuroscience 552  
Spring 2005

A photograph of a preserved anatomical specimen, likely a human spine section, viewed from a posterior perspective. The spinal canal is visible, containing the spinal cord and surrounding structures. A bright red, tubular vessel, the anterior spinal artery, is highlighted and secured with a black suture needle. A white identification tag is pinned to the specimen, pointing to the artery.

1a. Anterior  
spinal artery

A photograph of a human spine specimen during a dissection. A large, translucent yellow bulb, likely containing iodine or another preservative, is held by a gloved hand above the spine. A thin black line points from the label to a specific structure on the spine. The spine is pinkish-red with visible muscle tissue. The label is positioned to the right of the spine.

1a. Anterior  
spinal arte

1b. Posterior  
spinal arteries



1b. Posterior  
spinal arteries



2f. Fasciculus  
gracilis

2e. Dorsal intermediate  
sulcus

2g. Fasciculus  
cuneatus

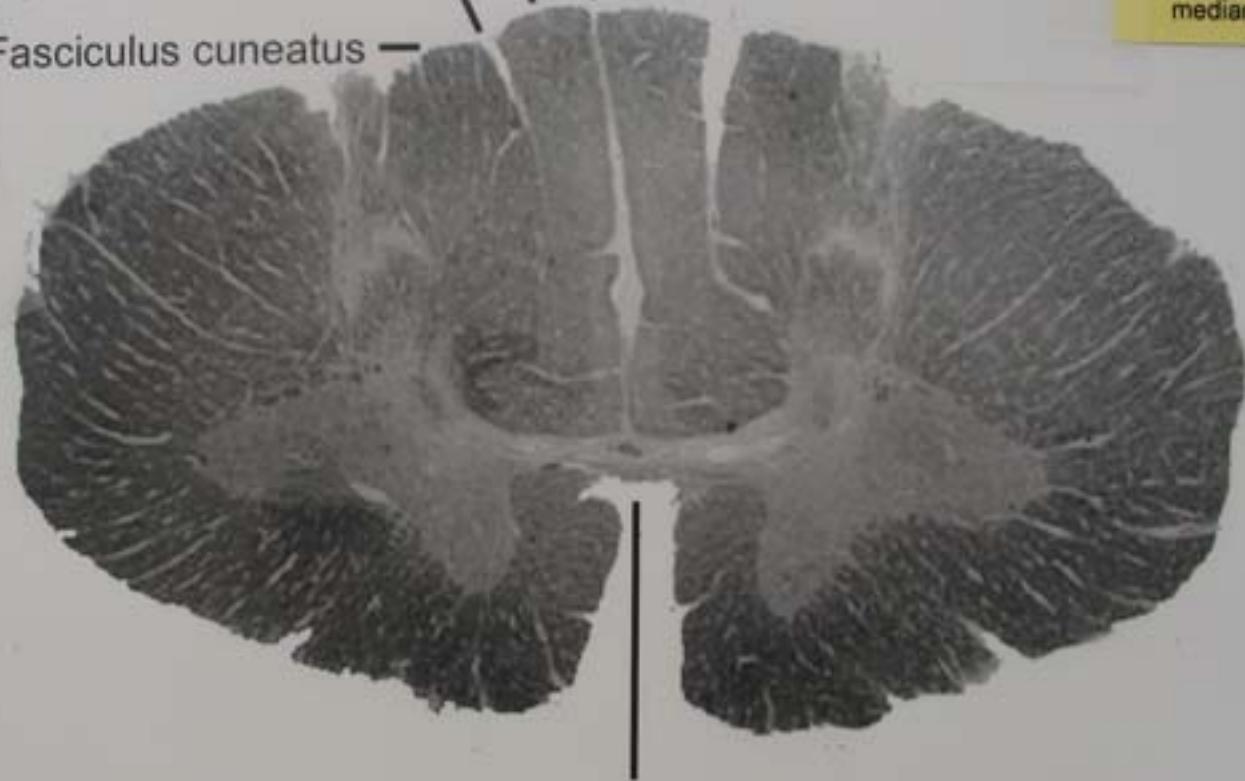
2f. Fasciculus gracilis

2e. Dorsal intermediate sulcus

2g. Fasciculus cuneatus

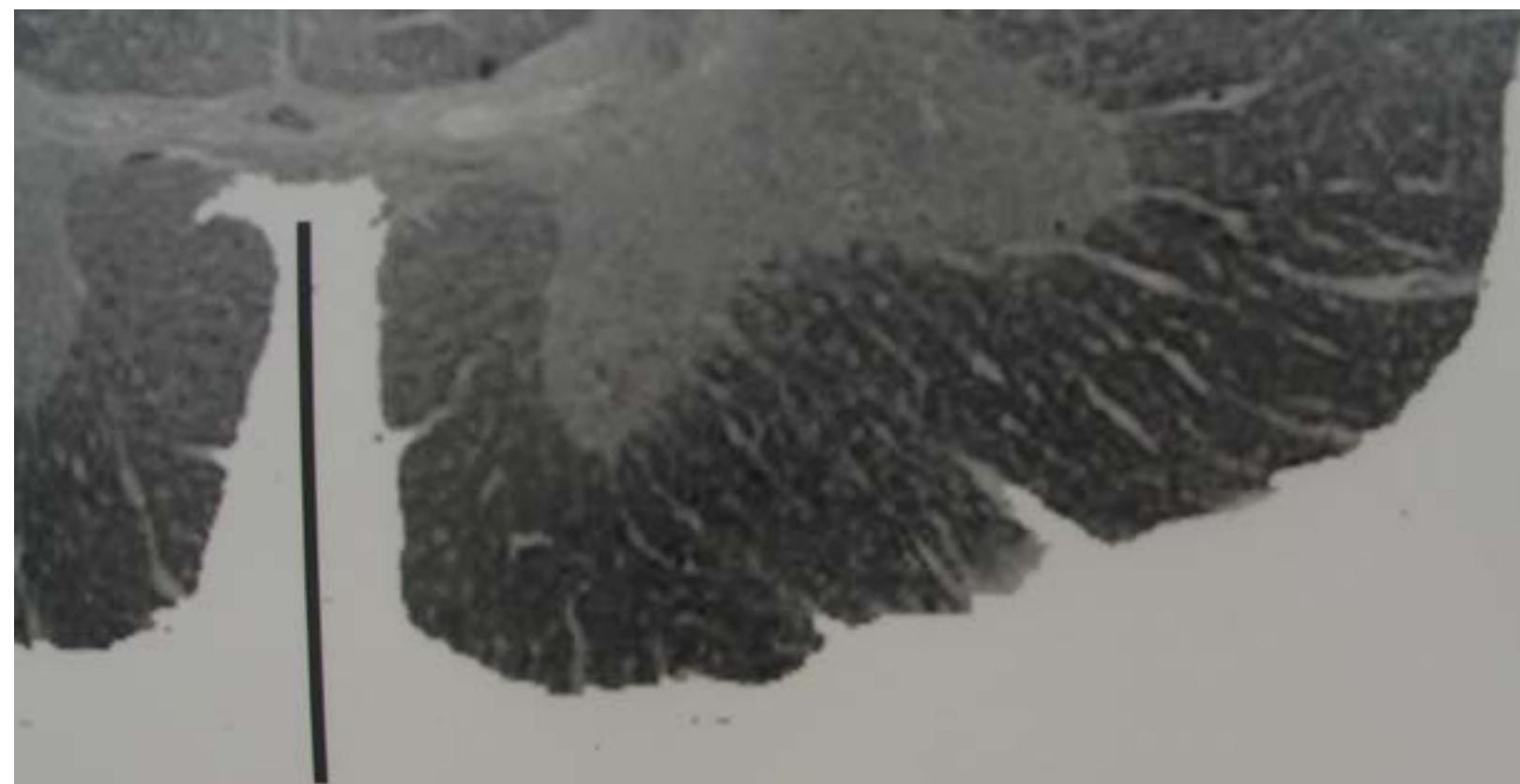
2b. Dorsal (posterior) median sulcus

2b. Dorsal (posterior)  
median sulcus



2a. Ventral (anterior) median fissure

2a. Ventral (anterior)  
median fissure



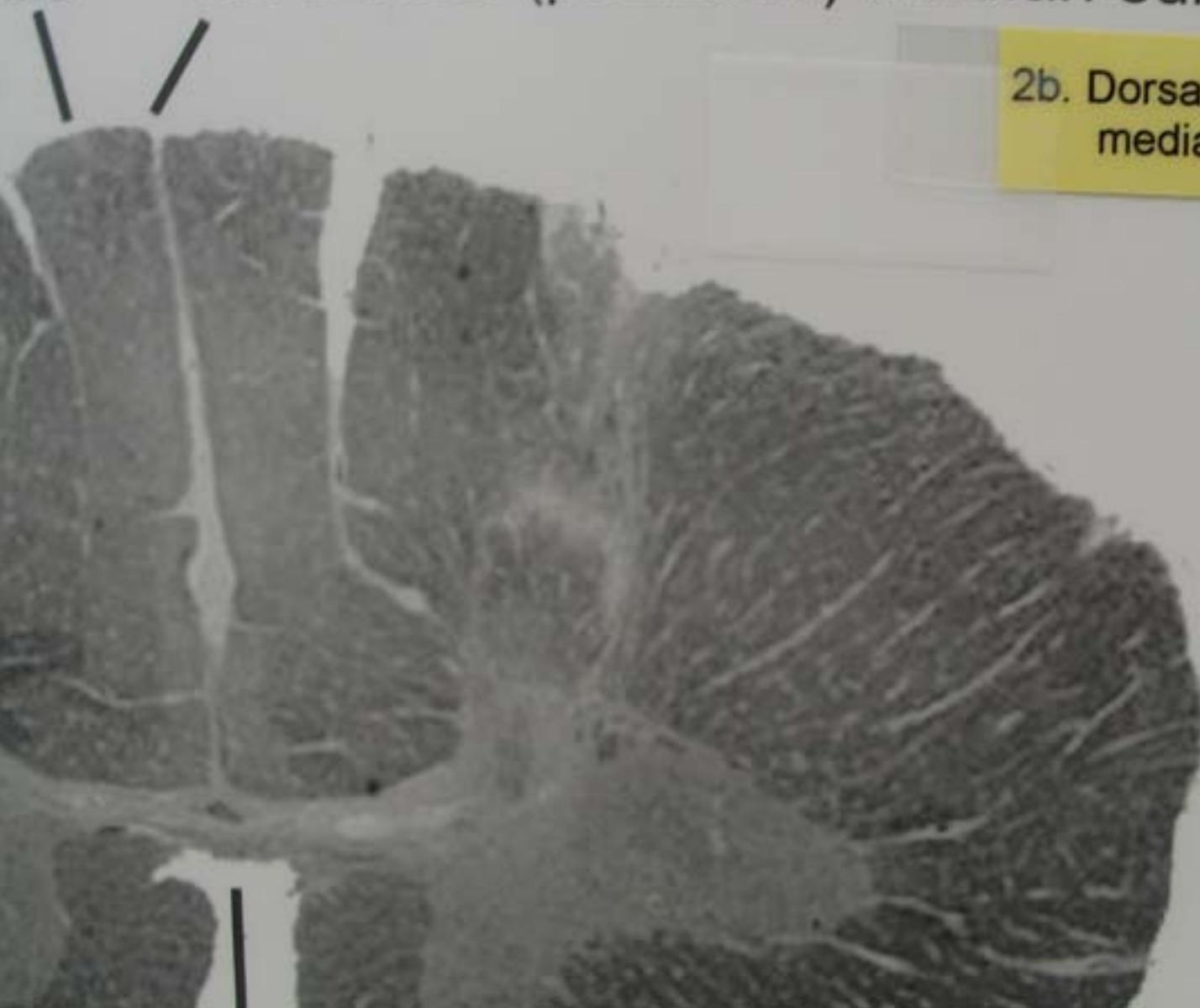
2a. Ventral (anterior) median fissure

2a. Ventral (anterior)  
median fissure

CS

ilis

2b. Dorsal (posterior) median sulcus



2b. Dorsal (posterior)  
median sulcus

cs

2c. Dorsolateral sulcus

2d. Ven  
sulcu

2c. Dorsolateral sulcus

d. Ventrolateral  
sulcus



2d. Ventrolateral  
sulcus



2d. Ventrolateral  
sulcus

2f. Fasciculus  
gracilis



2e. Dorsal intermediate  
sulcus

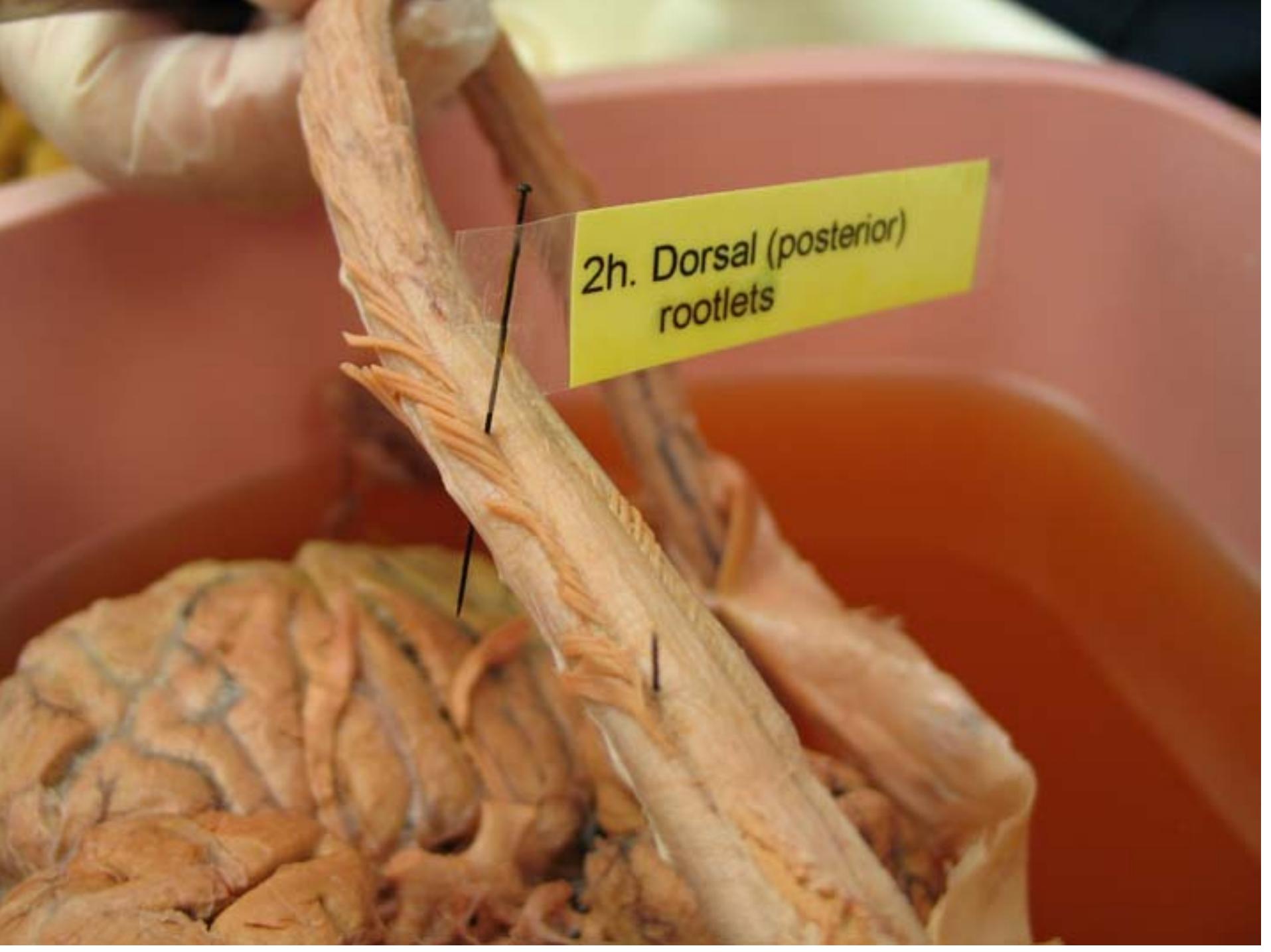
2f. Fasciculus gracilis  
2e. Dorsal intermediate sulcus  
2g. Fasciculus cuneatus

2g. Fasciculus  
cuneatus





2h. Dorsal (posterior)  
rootlets

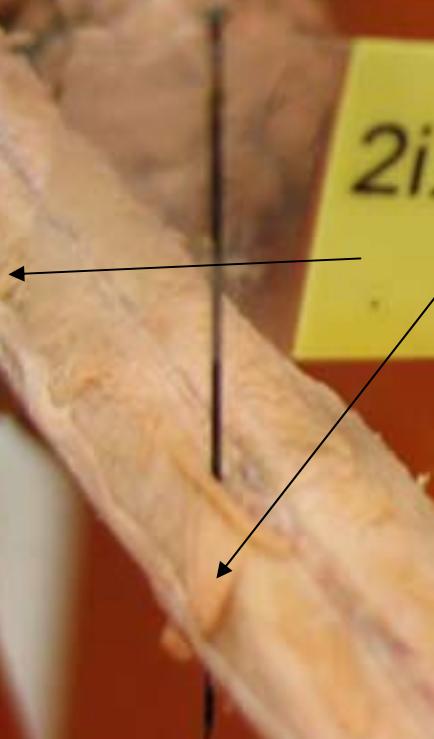


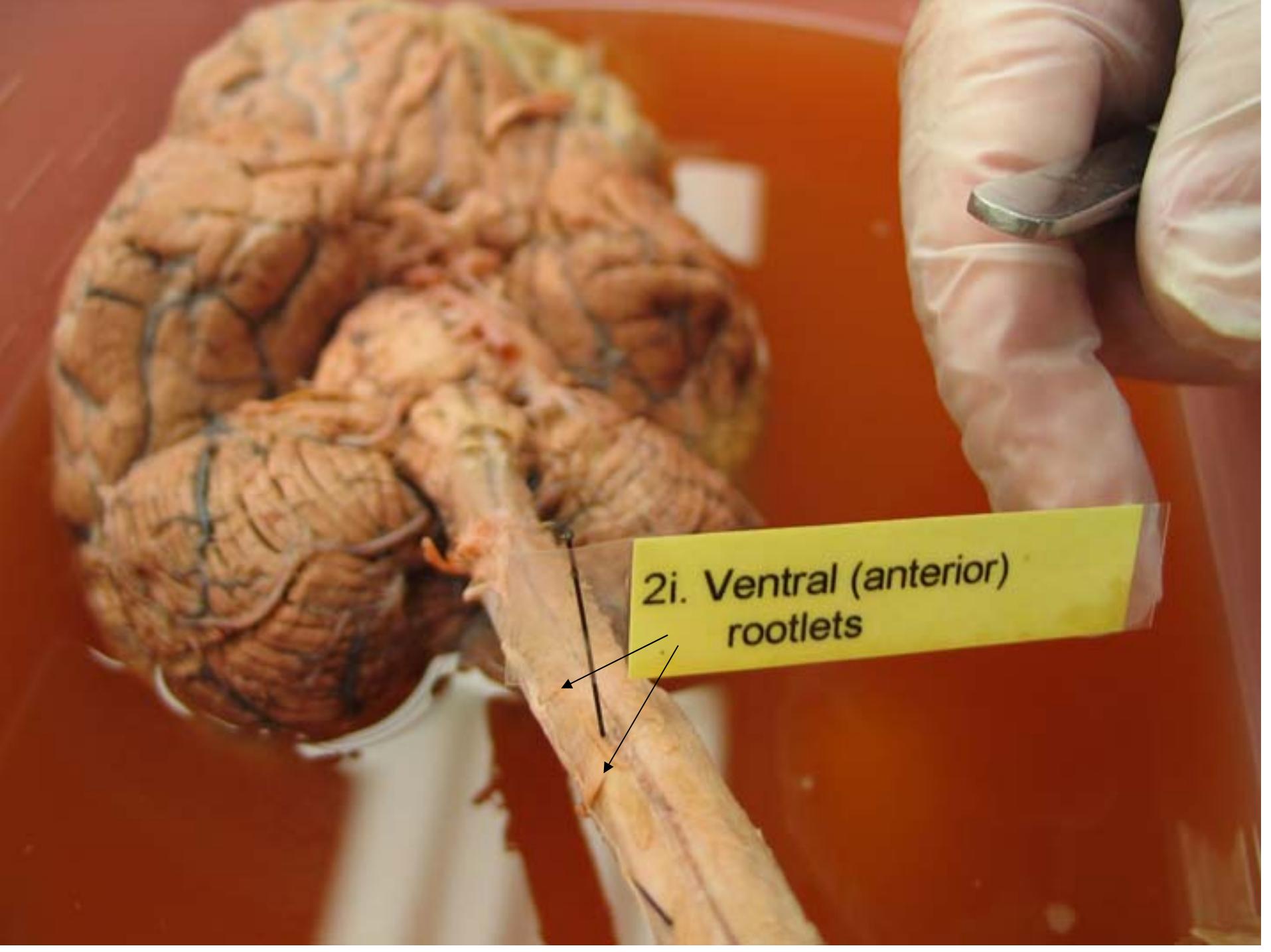
2h. Dorsal (posterior)  
rootlets



2h. Dorsal (posterior)  
rootlets

2i. Ventral (anterior)  
rootlets





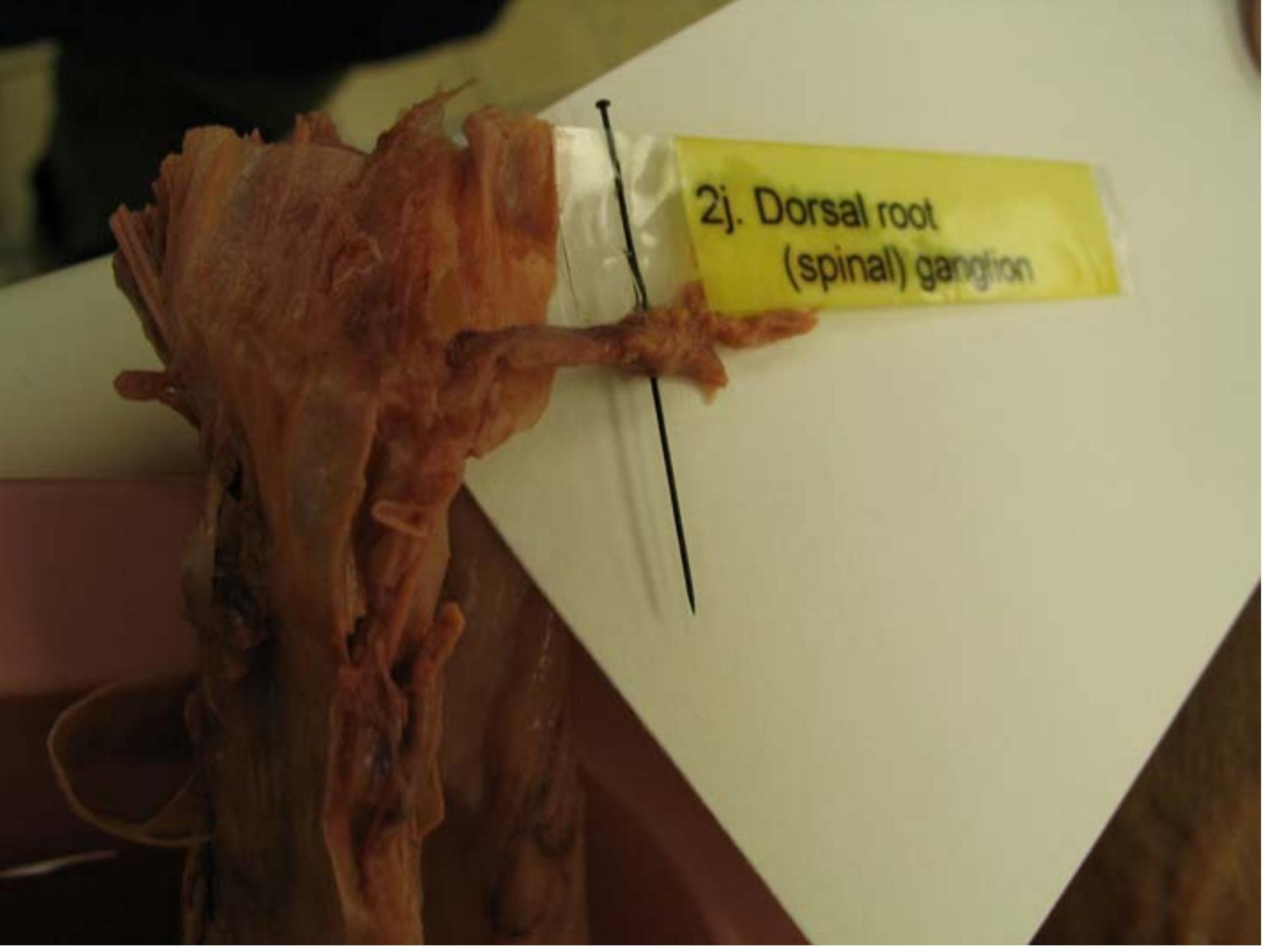
2i. Ventral (anterior)  
rootlets

A photograph of a biological specimen, specifically a dorsal root (spinal) ganglion, mounted on a white board. The specimen consists of several reddish-brown, layered structures, likely nerve fibers or connective tissue, attached to a central, pale, elongated structure. A black needle-like probe is inserted into the central structure. A yellow label is positioned to the right of the specimen, containing the text "2j. Dorsal root (spinal) ganglion".

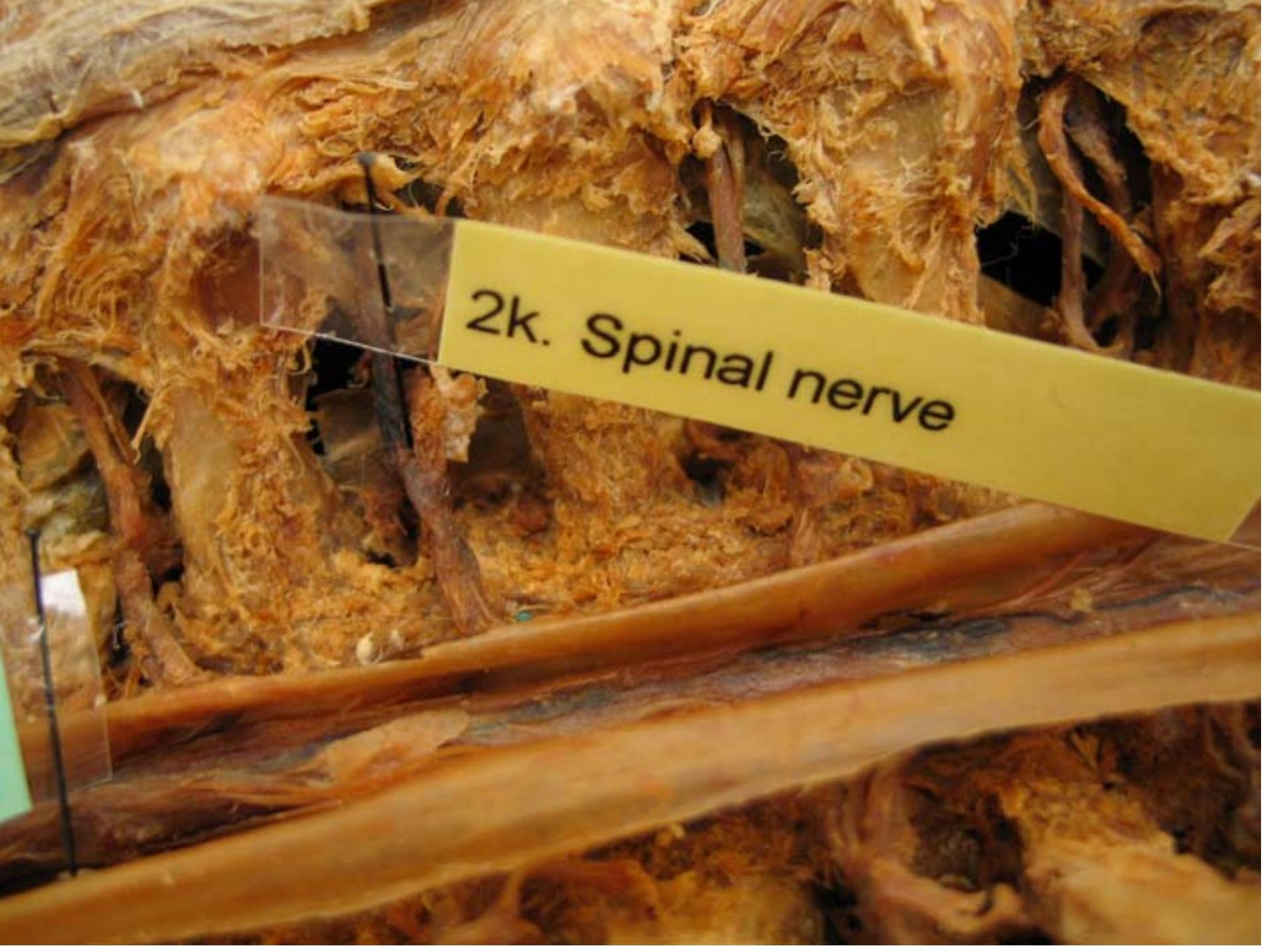
2j. Dorsal root  
(spinal) ganglion

2). Dorsal root  
(spinal) ganglion

2). Ventrail (antero)  
root fibres



2j. Dorsal root  
(spinal) ganglion



2k. Spinal nerve



2k. Spinal nerve



2k. Spinal nerve

2m. Filum  
terminale

2l. Conus  
*medullaris*



2m. Filum  
terminale

2l. Conus  
medullaris

21 Cr

2m. Filum  
terminale

21 Co

2m. Filum  
terminale



2n. Cauda  
equina

2n. Cauda  
equina



2n. Cauda  
equina

2n. Cauda  
equina



20. Cervical  
enlargement

3h. denticulate  
ligaments



20. Cervical  
enlargement

3h. denticulate  
ligaments

A photograph of a preserved human spinal cord specimen. The specimen is stained with a reddish-orange color, highlighting the tissue against a yellowish background. Two anatomical features are labeled with yellow pins and cards:

1b. Posterior spinal arteries

2p. Lumbar enlargement

1b. Posterior spinal arteries

2p. Lumbar enlargement

3a. Epidural  
space





A photograph of a human spine from a posterior perspective. The vertebrae are visible, with the spinal canal containing the spinal cord. A vertical black line is drawn through the center of the spine, indicating the location of the epidural space. The surrounding tissue is a reddish-brown color.

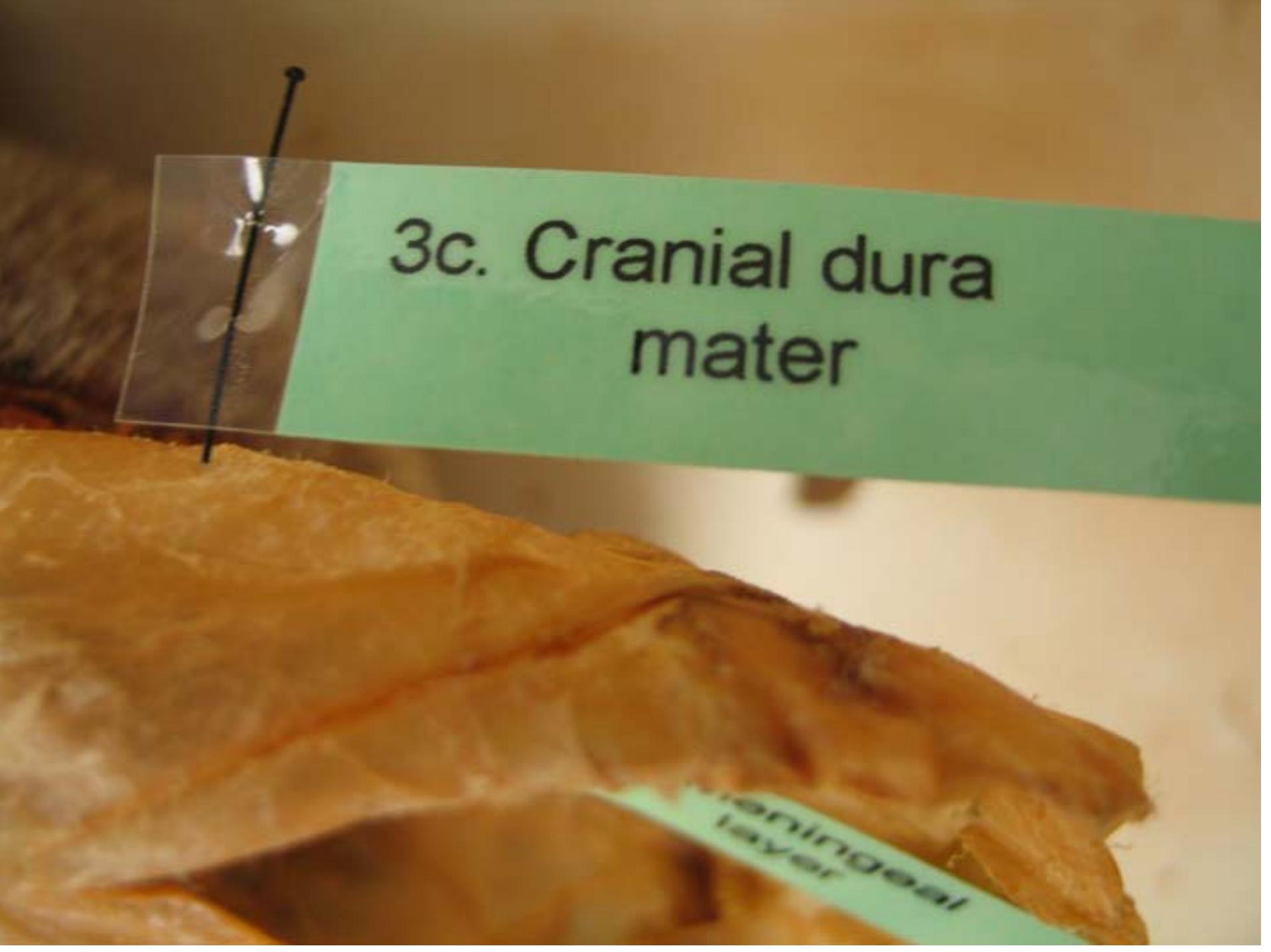
3a. Epidural  
space



3b. Spinal dura  
mater

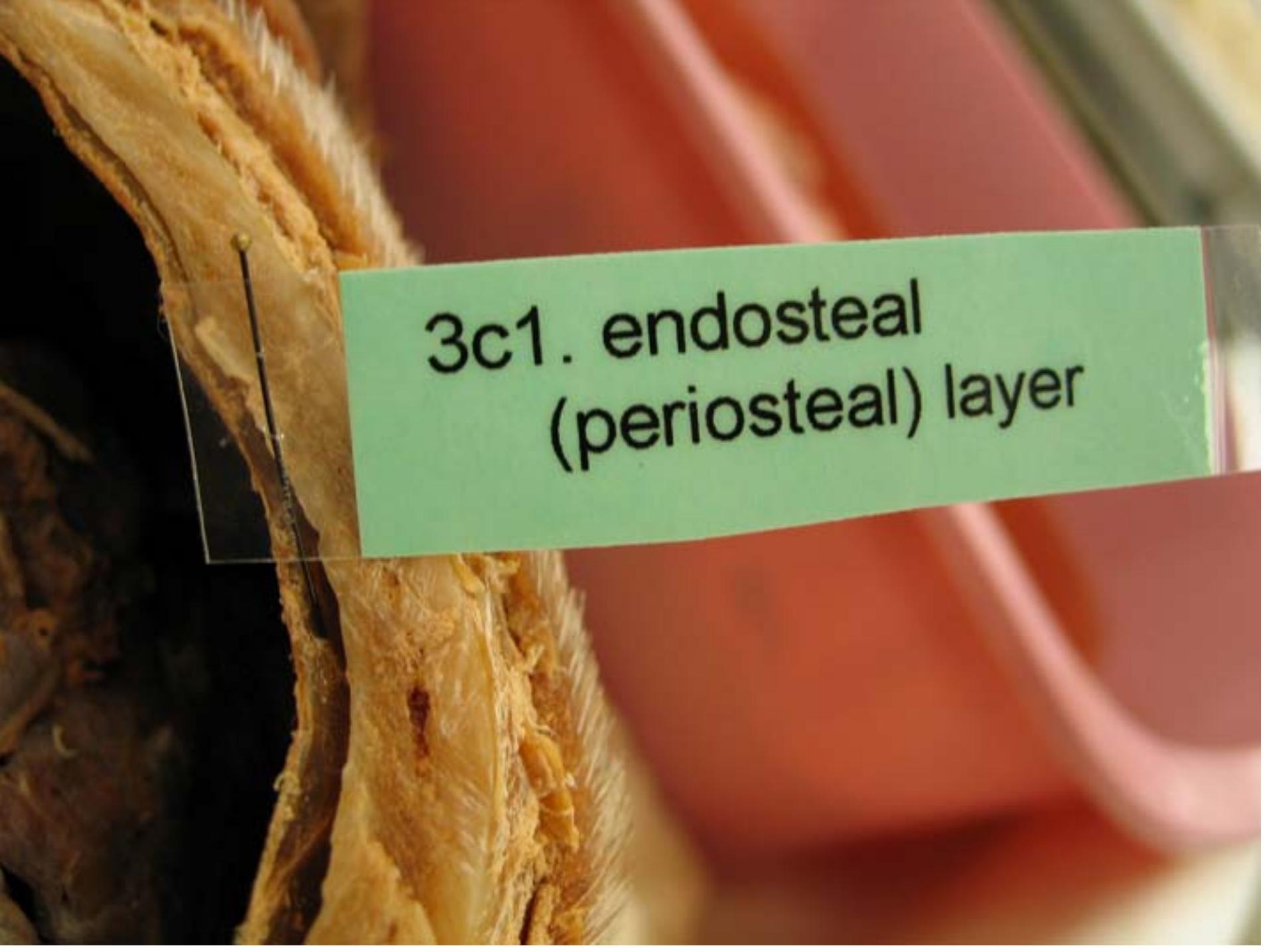


3b. Spinal dura  
mater



3c. Cranial dura  
mater

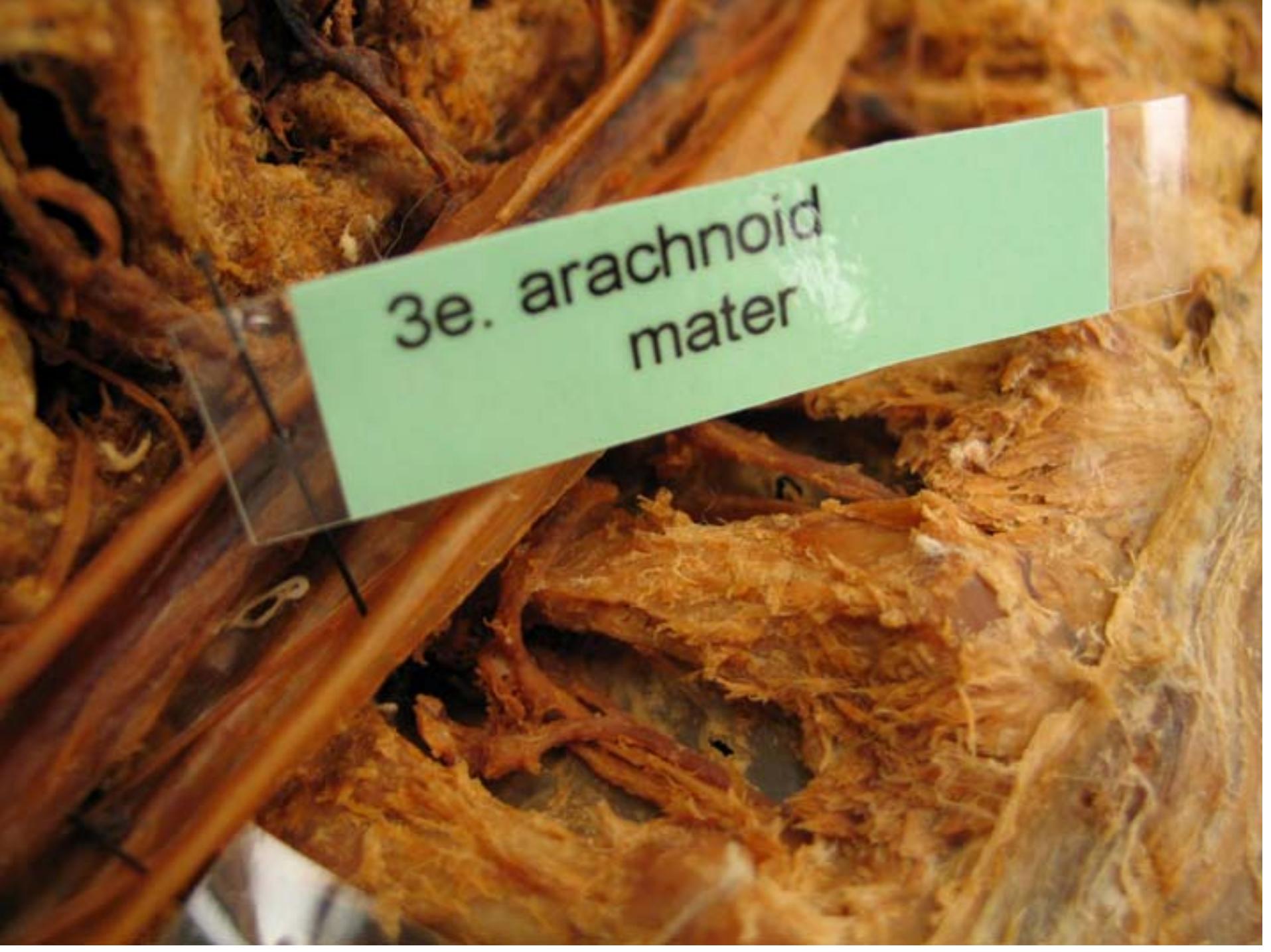
meningeal  
layer



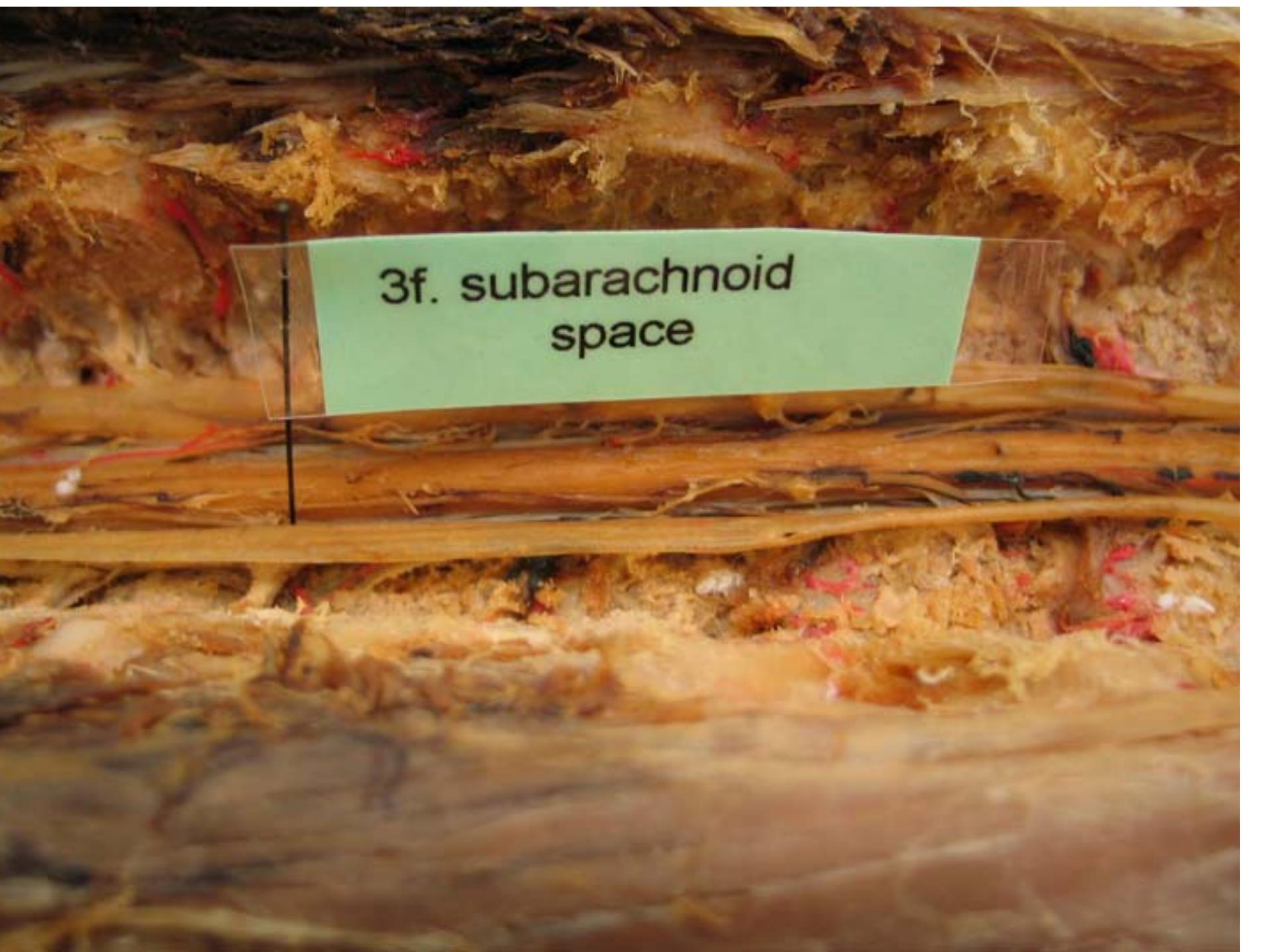
3c1. endosteal  
(periosteal) layer



3c2. meningeal  
layer



3e. arachnoid  
mater



3f. subarachnoid  
space



*3f. subarachnoid  
space*



3g. pia mater

3a. Epidural  
space

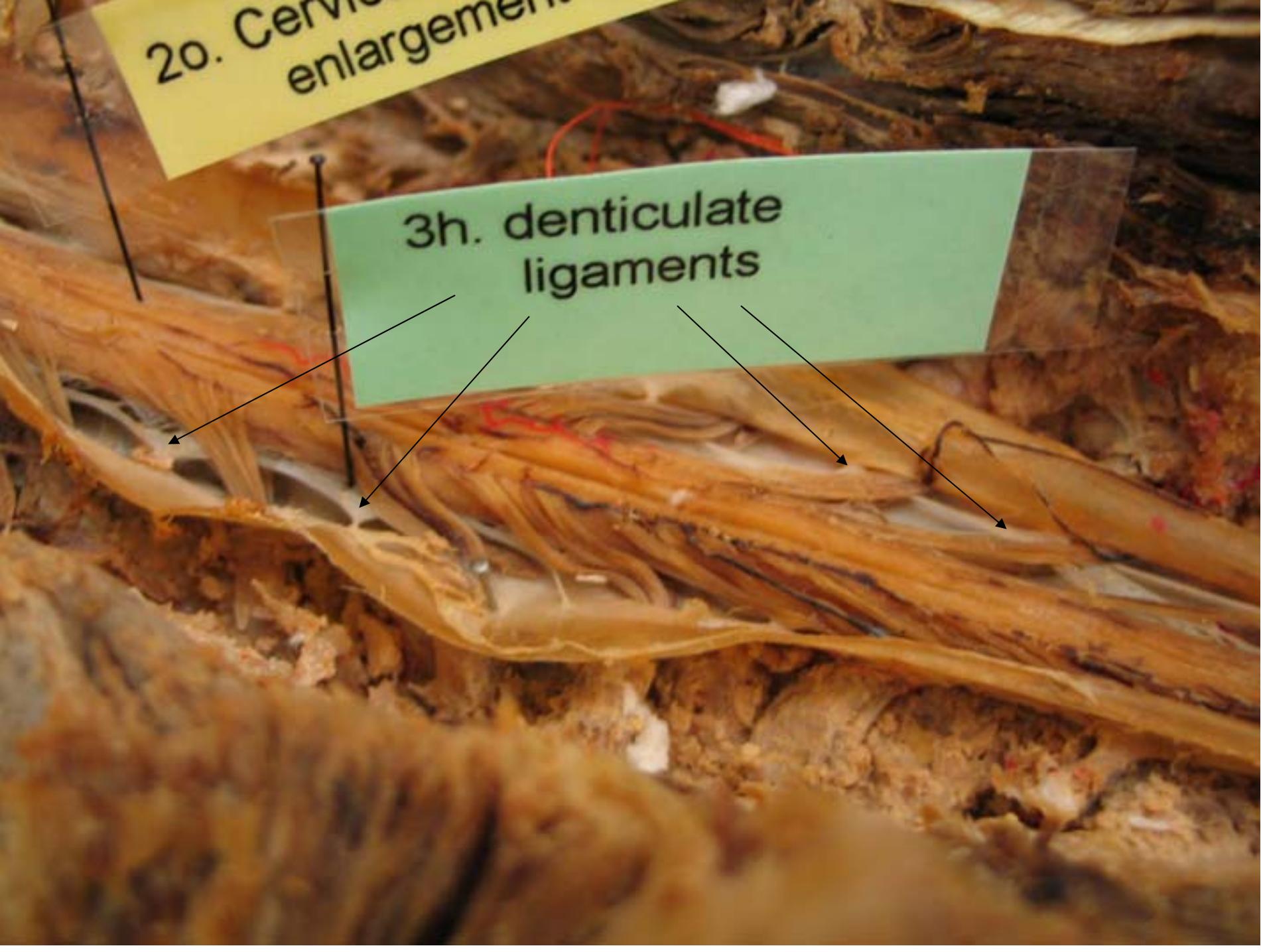
3g. pia mater

3a. Epidural  
space

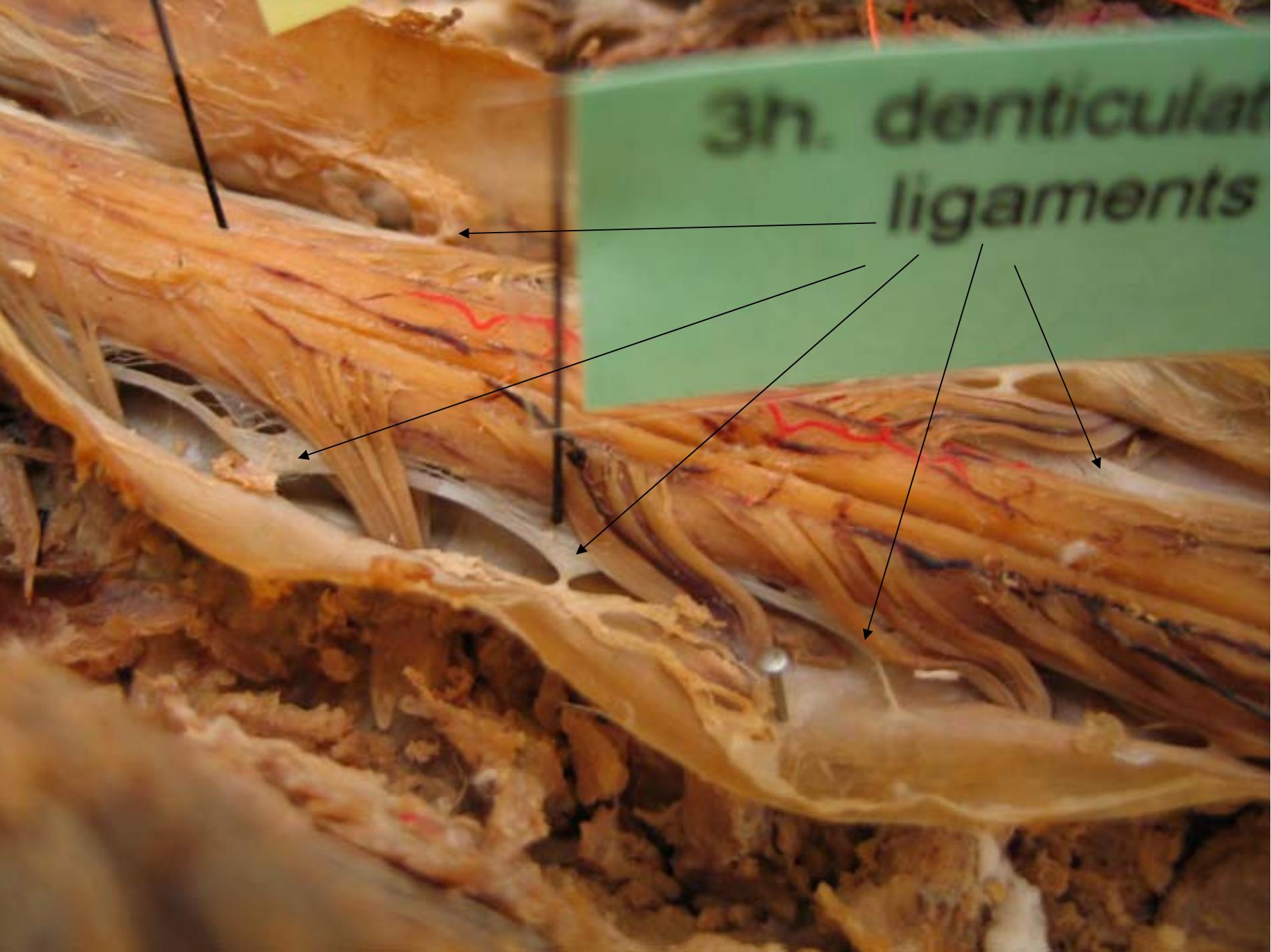
interior dura

20. Cervical  
enlargement

3h. denticulate  
ligaments



3h. denticular  
ligaments



4a. falx cerebri

4c1. sub  
region

4c1. subtentorial  
region

4b. tentorium  
cerebelli

4a. falx cerebri

3c1. endosteal  
(periosteal) layer

c7. subtentorial  
region

4b. tentorium  
cerebelli

4c1. subtentorial  
region

4b. tentorium  
cerebelli

4a. falx cerebri

3c1. endosteal  
(periosteal) layer

3c2. meningeal

c7. subter  
region

4b. tentoriu  
cerebe

4c1. subtentorial  
region

4b. tentorium  
cerebelli

4a. falx cerebri

3c1. endosteal  
(periosteal) layer

3c2. meningeal



4c2. supraten  
region

4c1. subtentorial  
region

4b. ten  
cen



4c2. supratentorial  
region

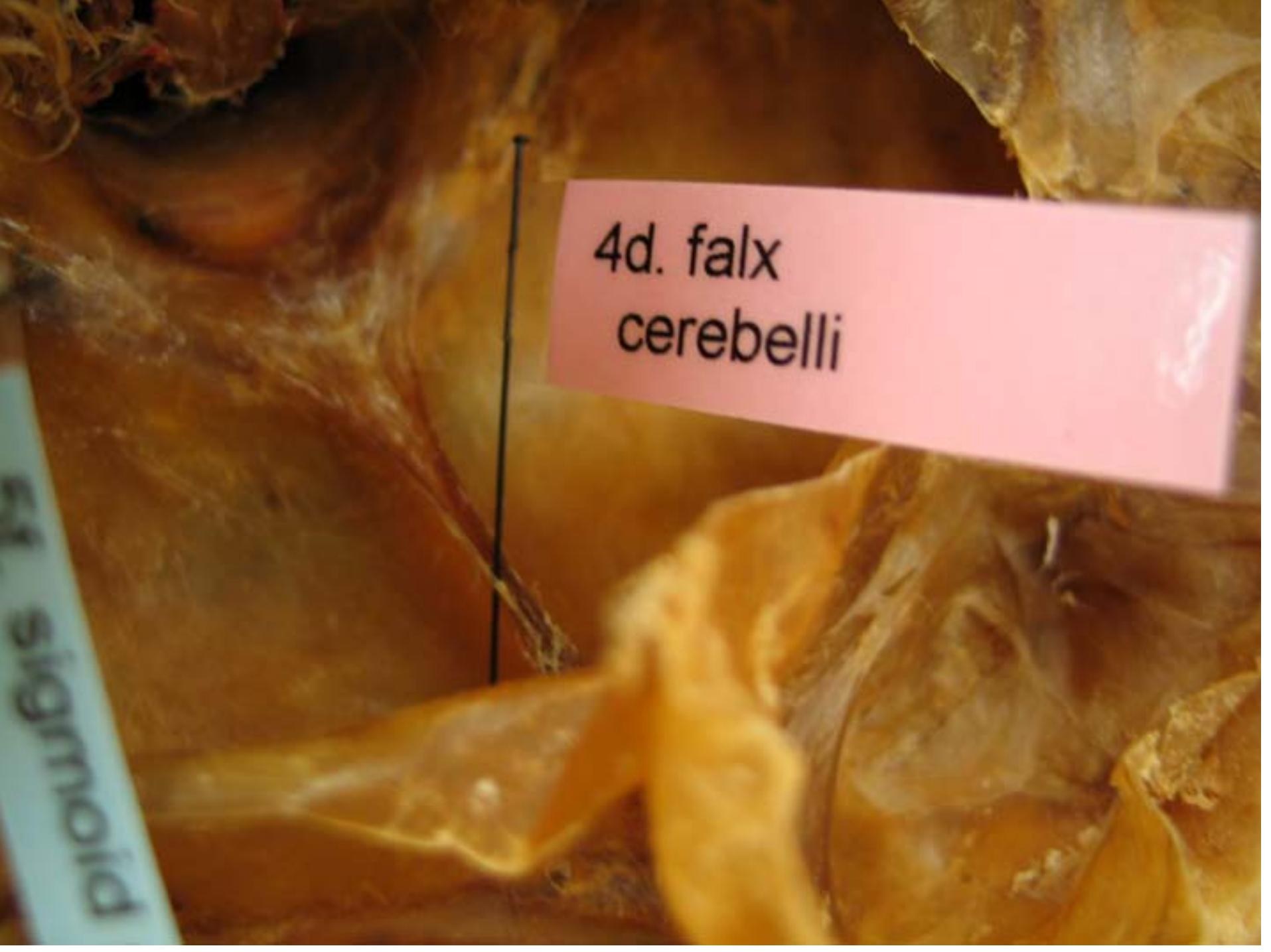
4c1. supratentorial  
region



4c2. supratentorial  
region



4c1. supratentorial  
region



A photograph of a brain specimen, likely a formalin-fixed specimen, showing the cerebellum and surrounding structures. A pink rectangular label is positioned in the upper right area of the image. A thin black line extends from the top edge of the label down towards the brain tissue, pointing to a specific anatomical feature. The label contains the following text:

4d. falx  
cerebelli

sigmoid

5f. sigmoid sinus

4d. falx  
cerebelli

4e. diaphragma  
sellae

Ae. dia  
sellae



4e. diaphragm  
sinuæ

6e. cistern of the  
lamina terminalis

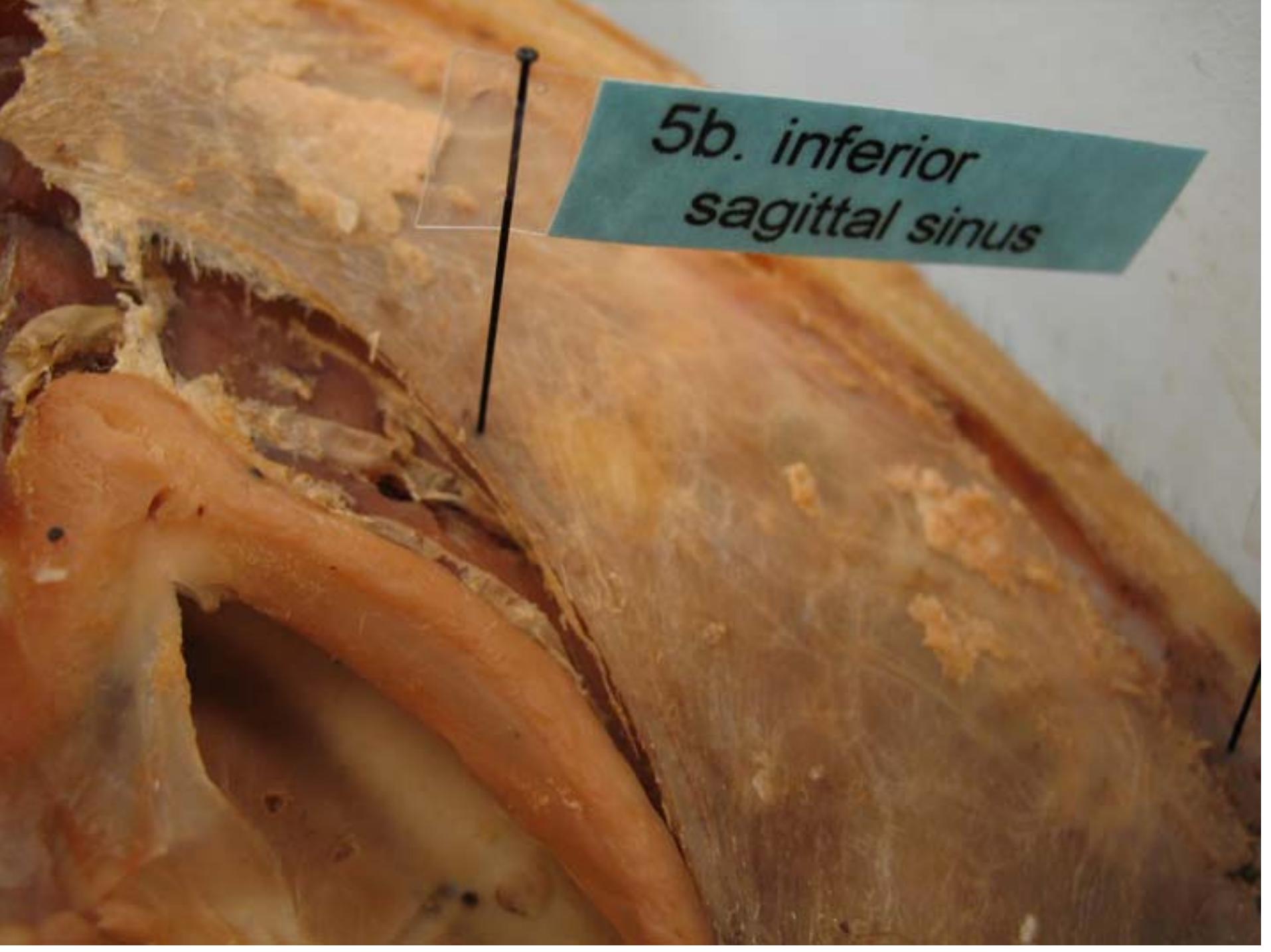
5b. inferior  
sagittal sinus

5a. superior  
sagittal sinus

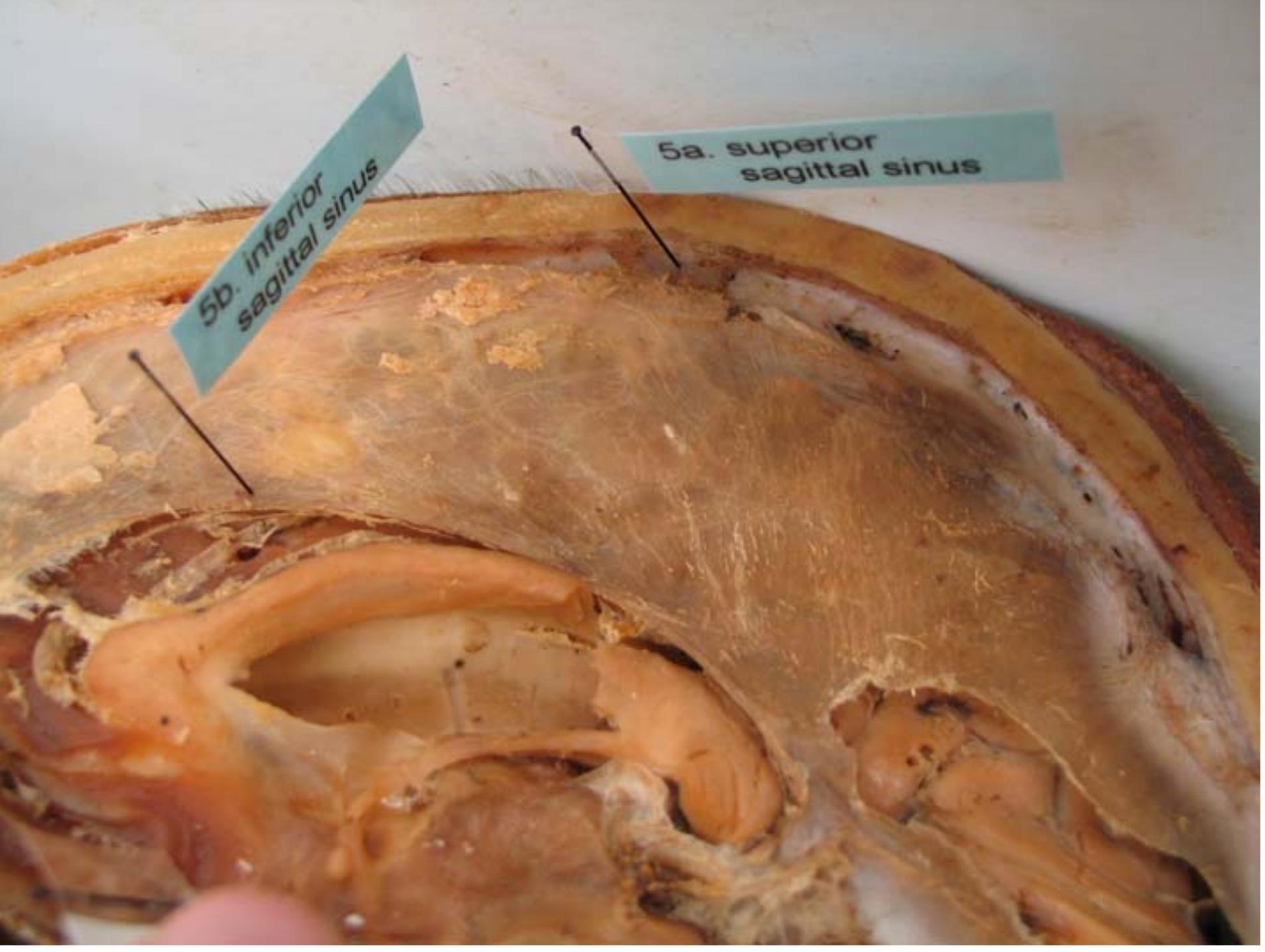
5b. inferior  
sagittal sinus

5a. superior  
sagittal sinus





*5b. inferior  
sagittal sinus*

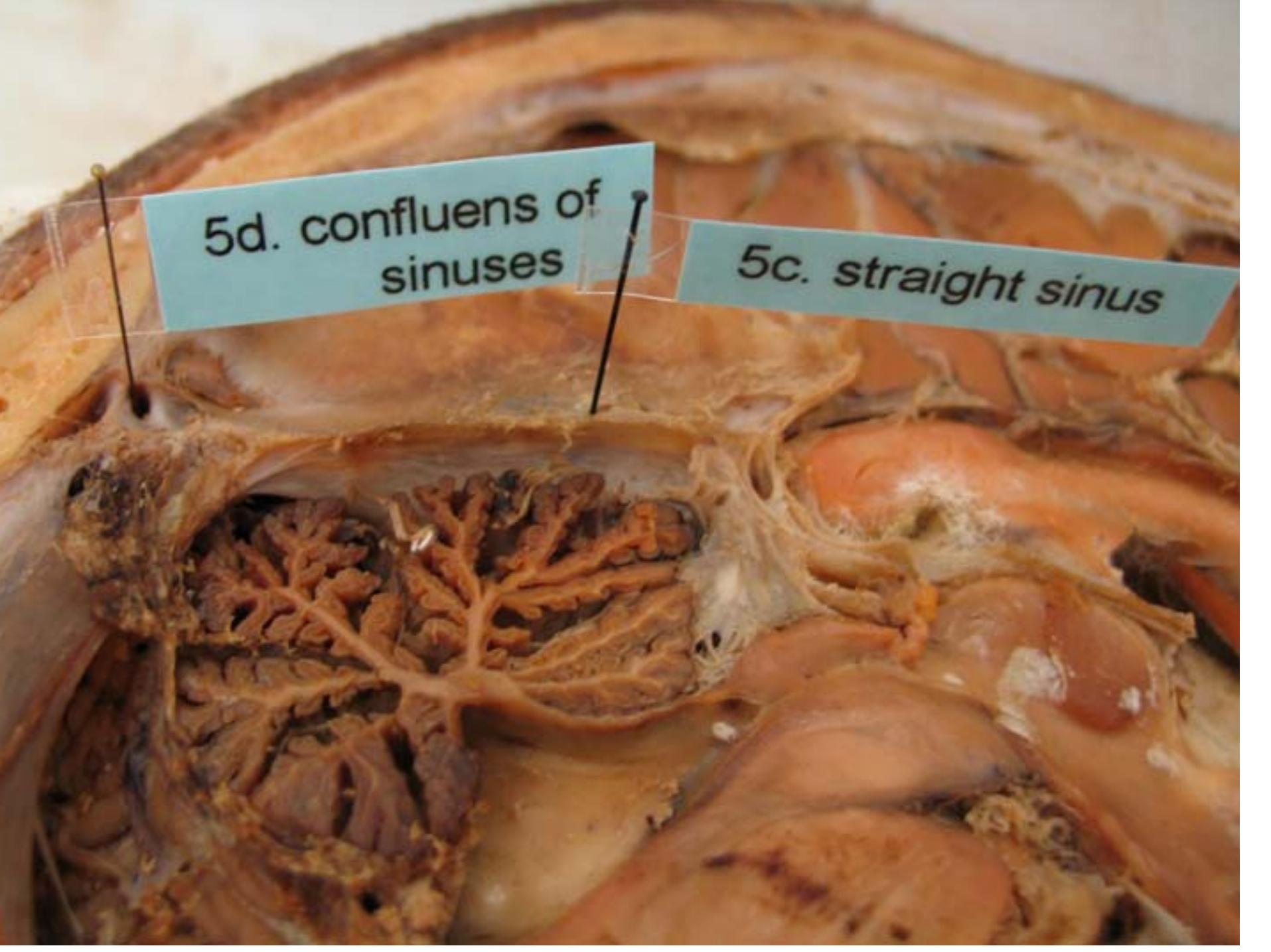


5b. inferior  
sagittal sinus

5a. superior  
sagittal sinus

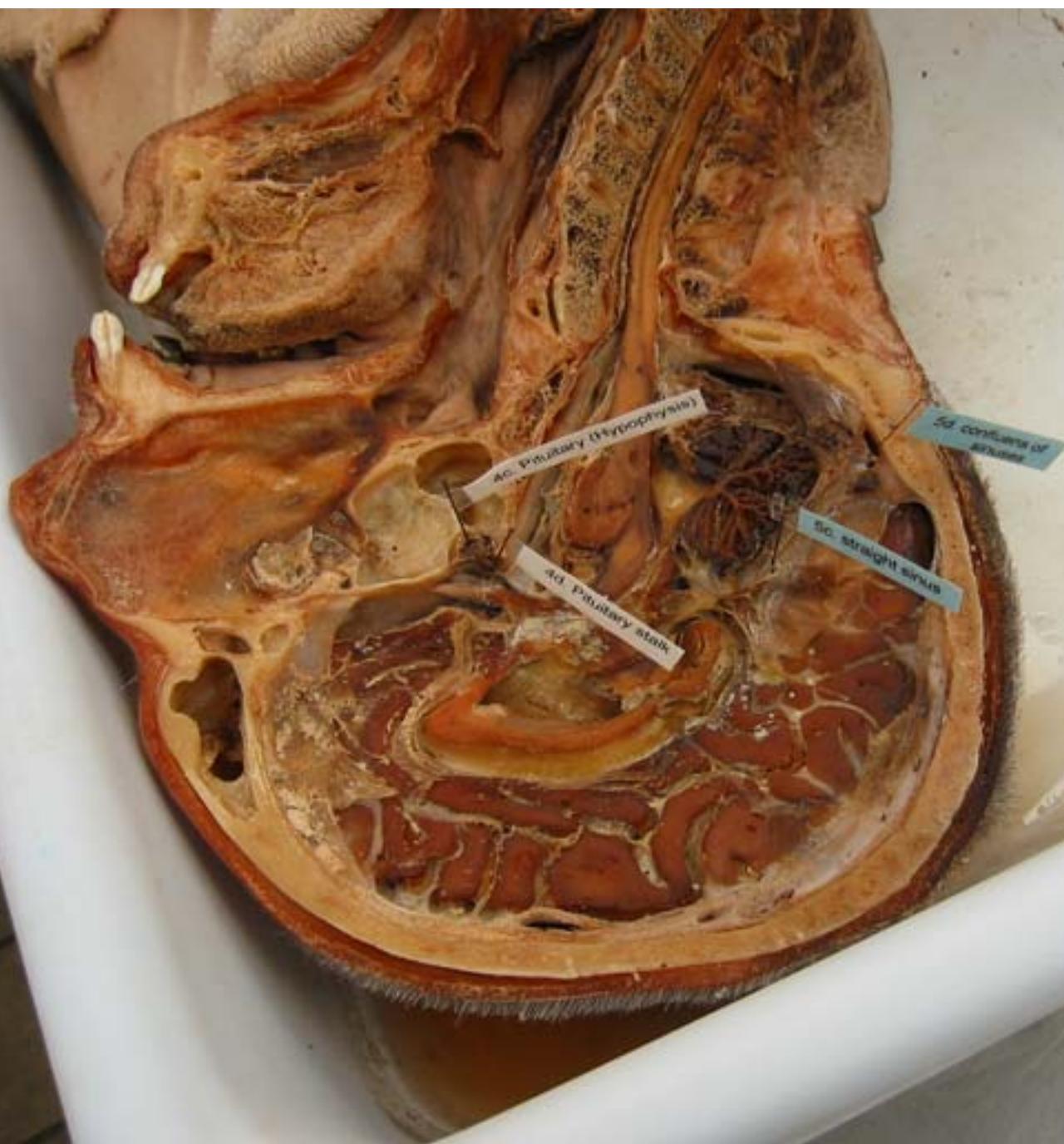
confluens of  
sinuses

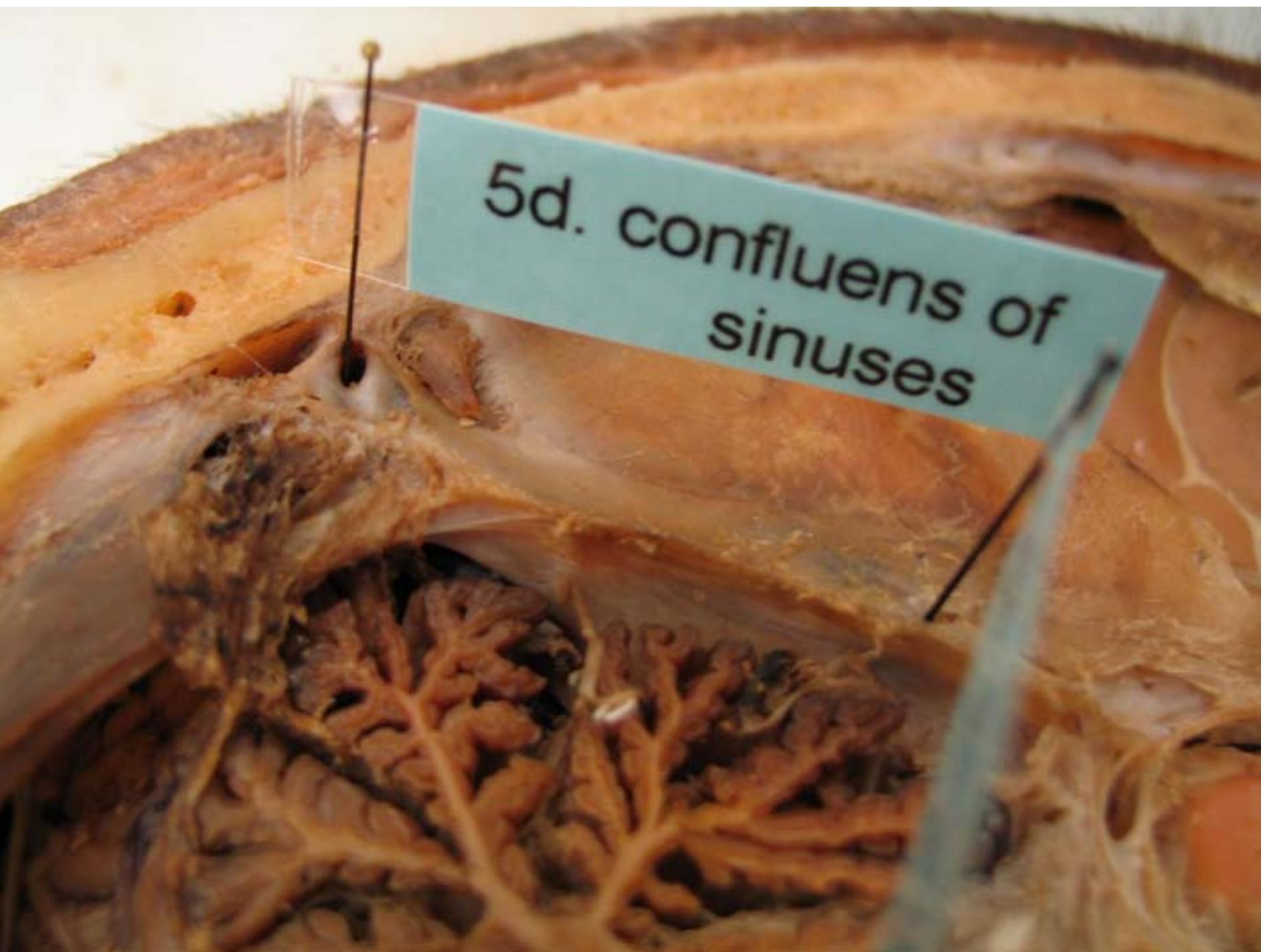
5c. straight sinus



5d. confluens of  
sinuses

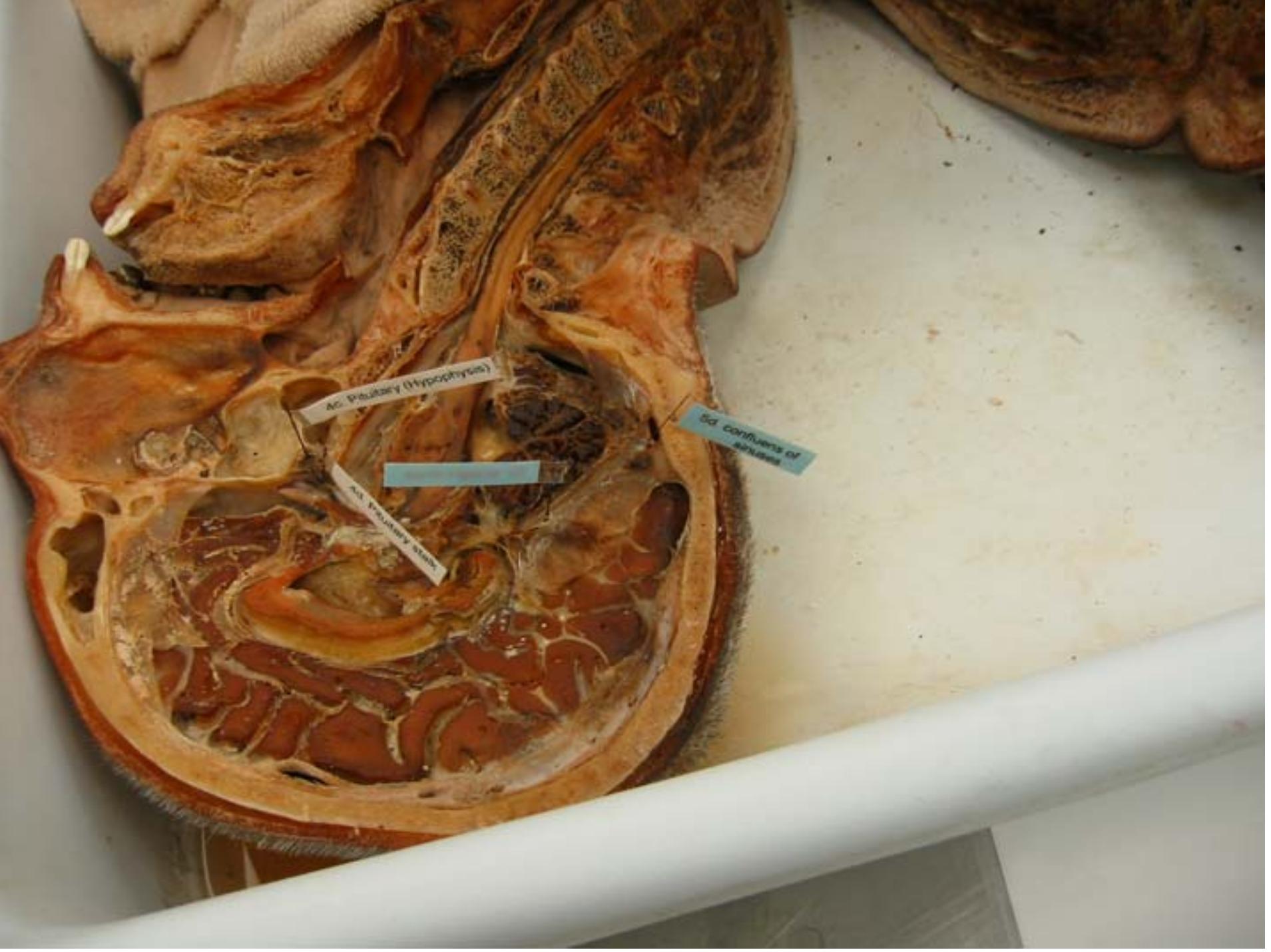
5c. straight sinus





A photograph of a human skull base specimen. A blue rectangular label is positioned in the upper right area, containing the text "5d. confluens of sinuses". A thin black line extends from the bottom of the label towards the underlying bone structure, indicating the location of the confluence of sinuses. The skull base shows various openings and recesses, with a large, dark, porous area at the bottom.

5d. confluens of  
sinuses





5e. transverse  
sinus



5e. transverse  
sinus

A detailed anatomical illustration of a cat's neck, showing the internal structures. A white rectangular label is positioned diagonally across the middle of the image. The label contains the text "5f. sigmoid sinus" in a black, sans-serif font. Two thin black lines extend from the top edge of the label to point to specific structures in the upper right quadrant of the image. The background shows various blood vessels and tissue layers in shades of orange, red, and brown.

5f. sigmoid sinus

5f. sigmoid sinus

5f. sigmoid sinus

5f. sig

5g. cavernous  
sinuses

5g. cavernous  
sinuses

A close-up photograph of a human skull base, specifically the sphenoid and occipital regions. The image shows various openings and recesses. A black line points from a small red dot located at the junction of the optic canal and the anterior clinoid process towards the text label. The text label identifies the structure as the intercavernous sinus.

5h. *intercavernous  
sinus (circular sinus)*

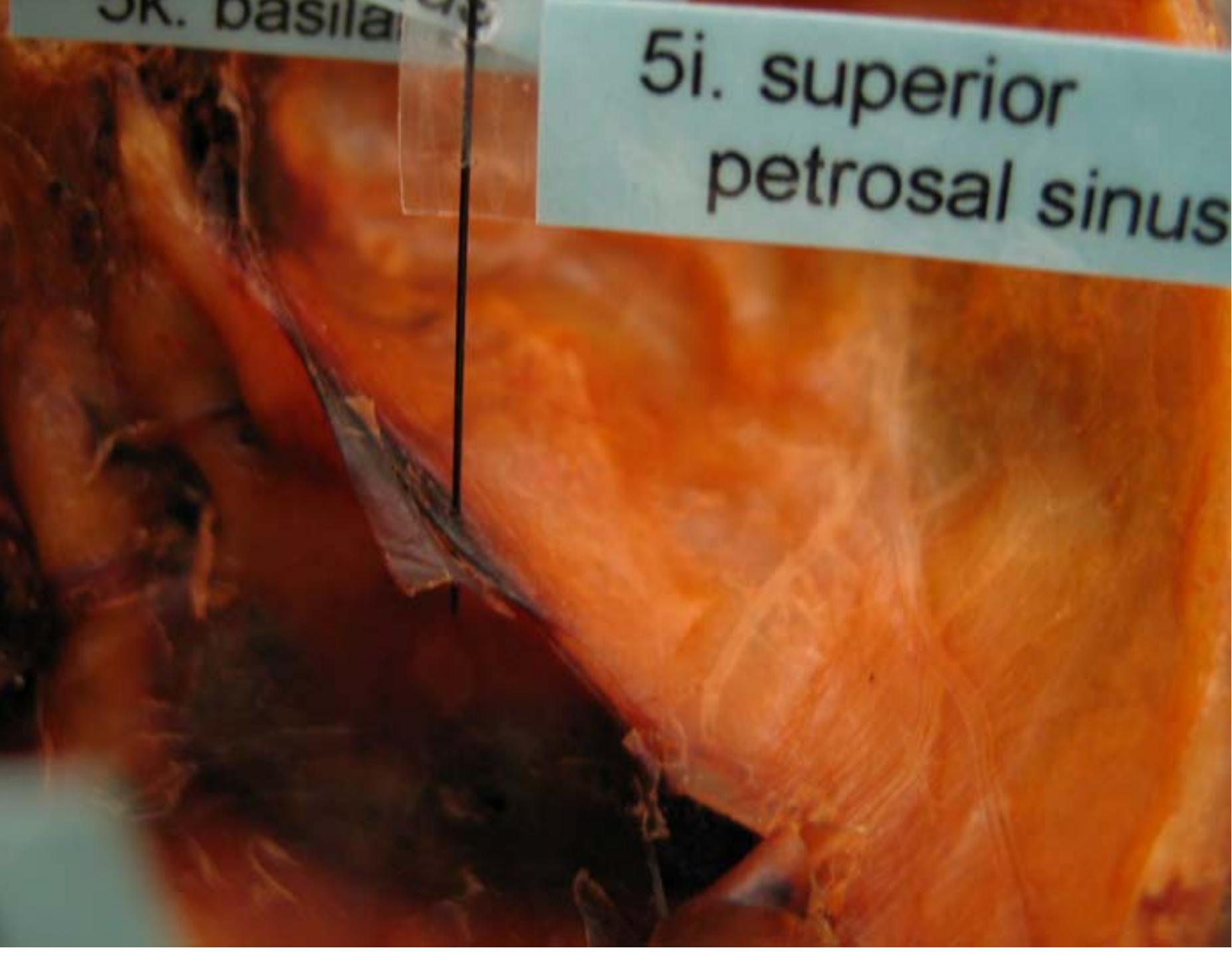


5i. superior  
petrosal sinus



JK. basila

5i. superior  
petrosal sinus



A photograph of a baboon brain specimen. A small white rectangular label is pinned to the brain, oriented vertically. It contains the following text:  
Sv. intercar. ven  
Jugular vein  
5. i.  
occipital  
sinus

A photograph of a large, yellowish-brown anatomical specimen, likely a bovine jugular vein, embedded in a block of formalin. The specimen is surrounded by a dark, textured material, possibly a mounting medium or preservative. Three white rectangular labels with black text are placed on the specimen, each with a thin black line pointing to a specific anatomical feature.

5j. inferior petrosal sinus

5i. superior petrosal sinus

5m. internal jugular vein

A photograph of a cadaveric dissection showing the internal carotid arteries and associated sinuses. The arteries are visible on the left, with the right side showing the petrosal sinuses. A white label is placed over the right side of the image, containing the following text.

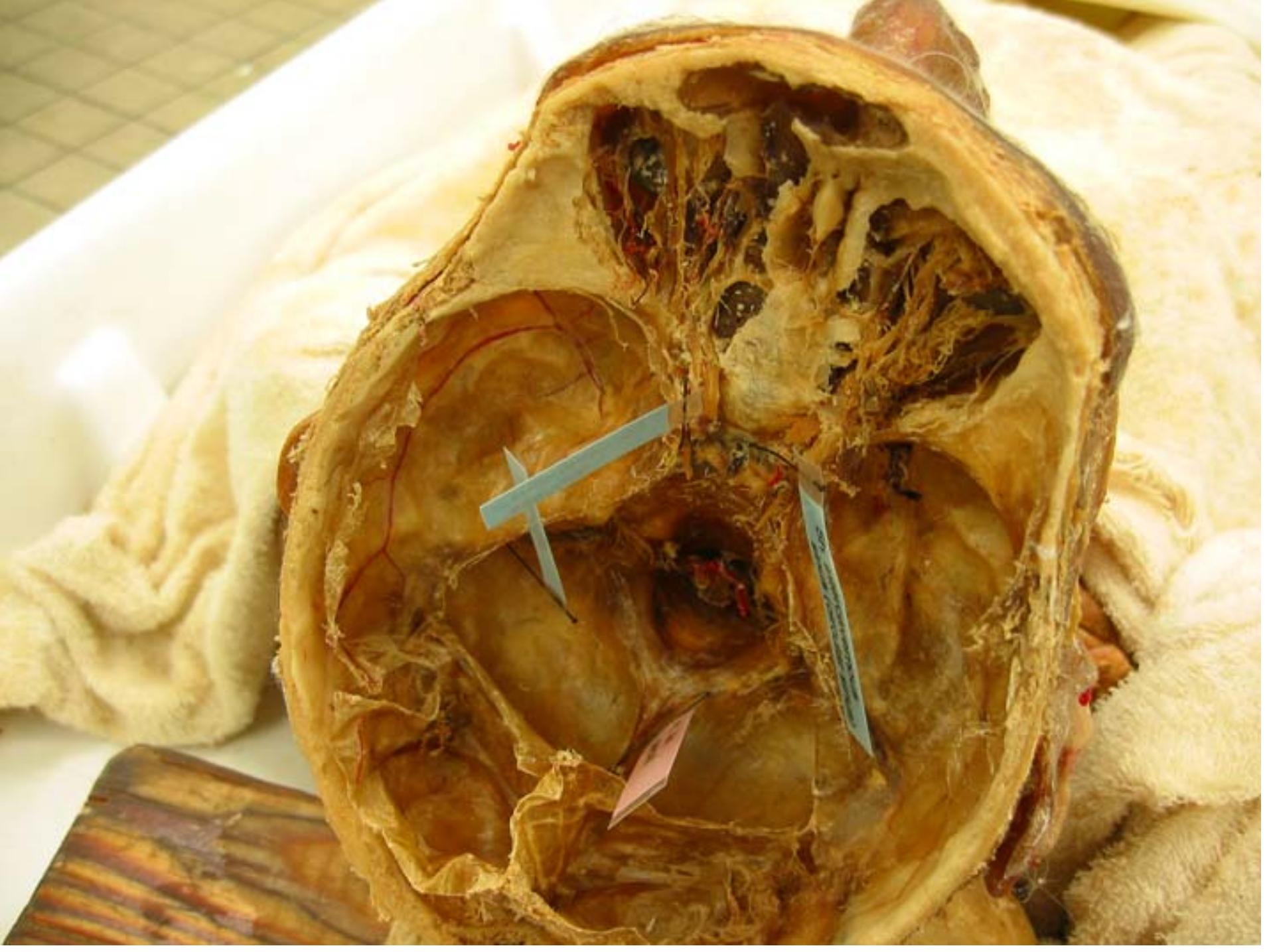
5j. inferior  
petrosal sinus

5k. basilar sinus

*5j. inferior  
petrosal sinus*

*5k. basilar sinus*





This image shows a detailed anatomical dissection of a bovine jugular vein and associated structures. The dissection reveals the internal jugular vein (5m. internal jugular vein) and the basilar sinus (5k. basilar sinus). The superior petrosal sinus (5i. superior petrosal sinus) is also visible. The labels are placed on translucent rectangular markers.

5i. superior  
petrosal sinus

5k. basilar sinus

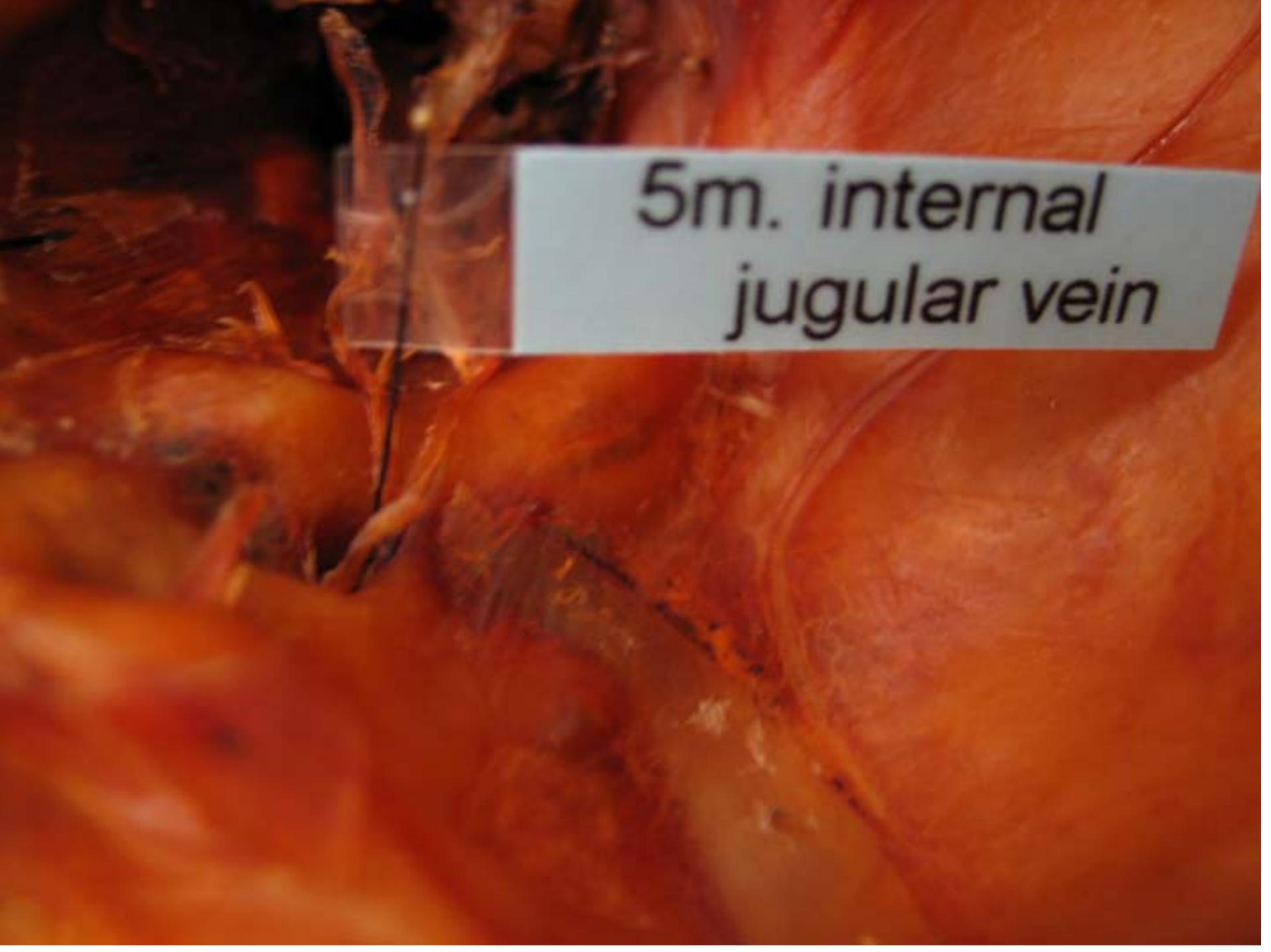
5m. internal  
jugular vein

5l. occipital  
sinus

5m. internal  
jugular vein

5m. internal  
jugular vein

5m. 15

A close-up photograph of a horse's neck. A clear plastic tube, likely a catheter or probe, is inserted into a large, dark blue vein, identified as the internal jugular vein. The surrounding skin is a reddish-orange color.

5m. internal  
jugular vein

5K. basilar sinus

5m. internal  
jugular vein

6a. cerebello-medullary  
cistern (cisterna magna)



peduncular  
stem

6a. cerebello-me  
cistern (cisterna





6a. cerebello-medullary  
cistern (cisterna magna)



6b. preoptine  
cistern



6b. preopticine  
cistern



6b. preponit  
cistern

6b. preopticine  
cistern



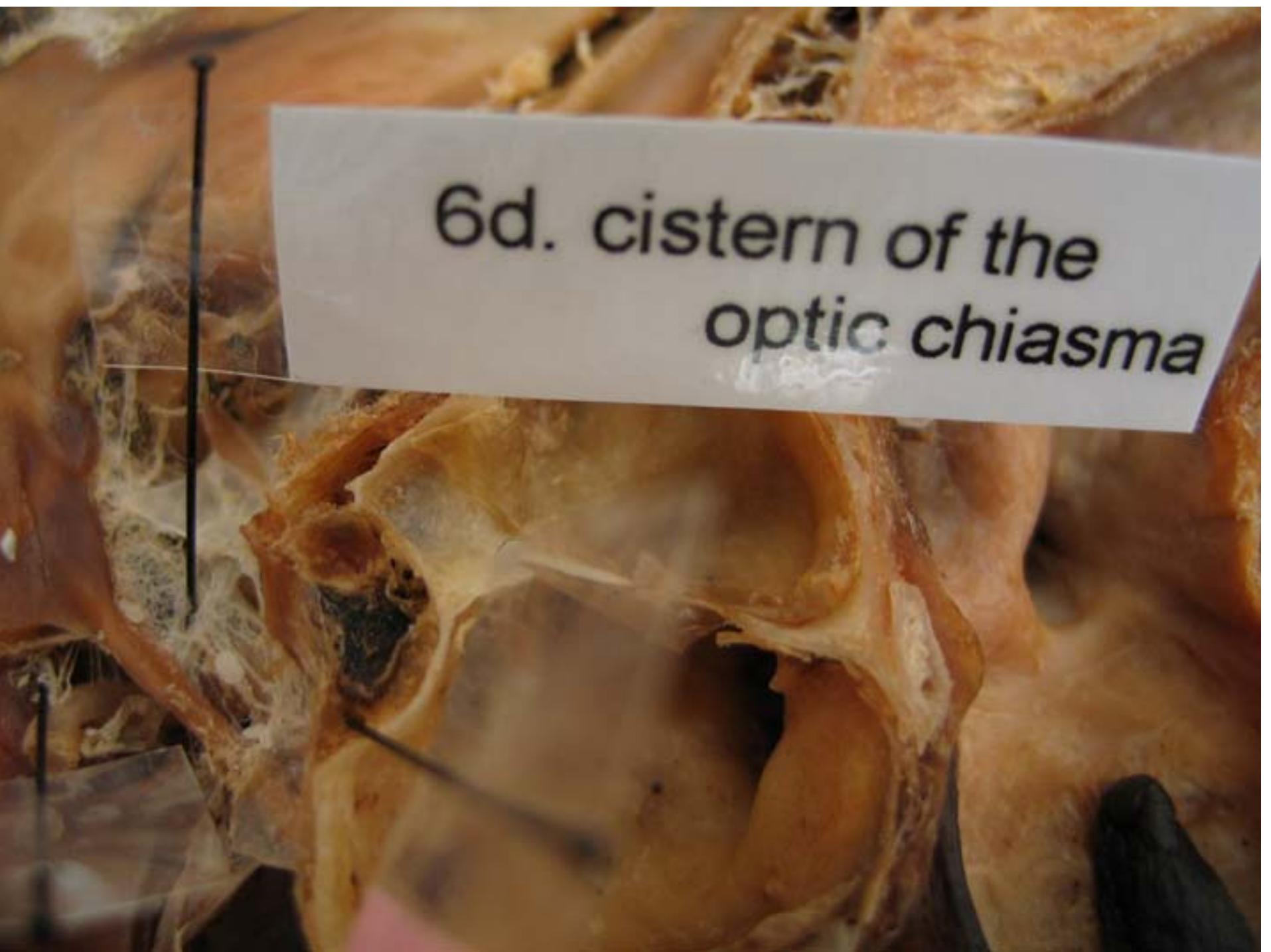
A close-up photograph of a brain specimen, likely a macaque or similar primate, showing the internal structures of the brainstem and cerebellum. A small, rectangular white label is pinned to the tissue, containing the text "6c. interpeduncular cistern".

6c. interpeduncular  
cistern



6c. *interpeduncular  
cistern*





A photograph of a human brain section showing the optic chiasm. The optic nerves from each eye meet at the optic chiasm, where fibers cross to the opposite side. The resulting optic tract then continues to the lateral geniculate nucleus and the optic radiations. The image shows the optic chiasm, optic nerves, and surrounding brain tissue.

6d. cistern of the  
optic chiasma



*6d. cistern of the  
optic chiasma*

A photograph of a human brain specimen, likely a formalin-fixed specimen, viewed from a dorsal perspective. The image highlights the optic chiasm and the surrounding structures. A small, clear plastic label is pinned to the brain tissue, containing the text '6e. cistern of the lamina terminalis'. The label is oriented vertically along the left edge of the image. Several black lines extend from the text on the label towards specific anatomical features: one line points to the optic chiasm, another points to the anterior commissure, and a third points to the infundibulum.

6e. cistern of the  
lamina terminalis

6e. cistern of the  
lamina terminalis



6d. cistern of the optic chias

**6e. cistern of the lamina terminalis**



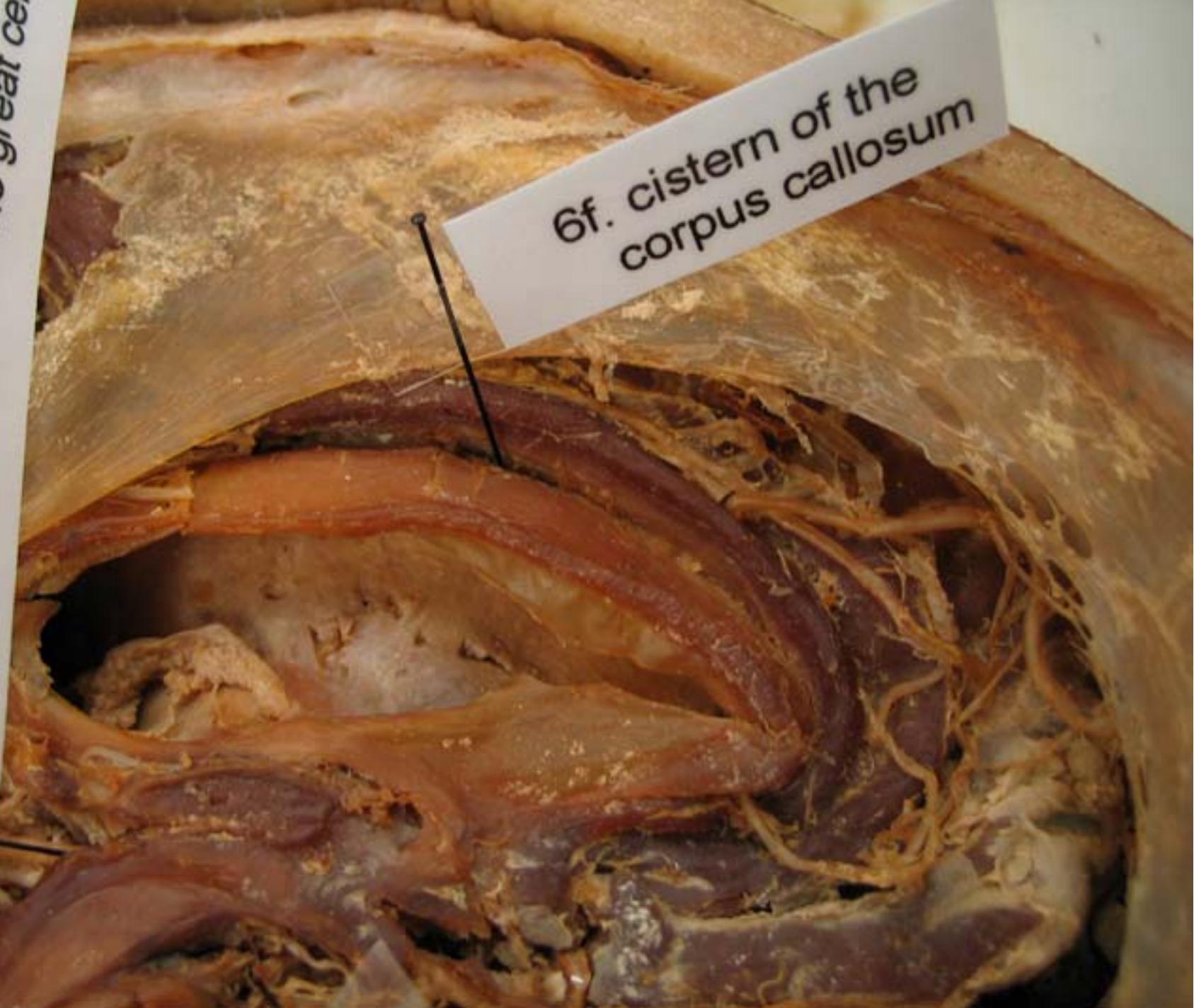
4e. diaphragm  
sinuæ

6e. cistern of the  
lamina terminalis

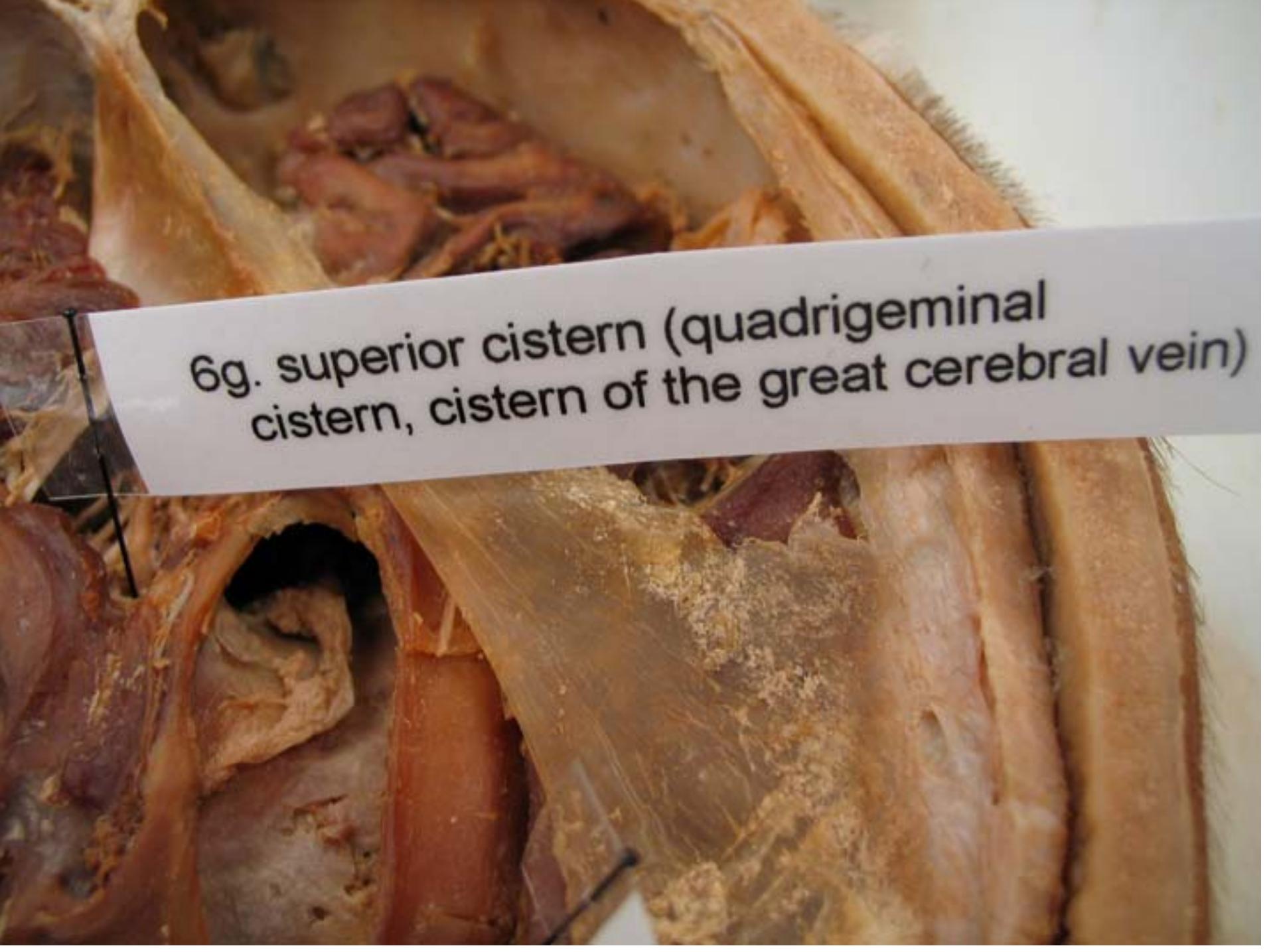


6f. cistern of the  
corpus callosum

6g. superior cistern (quadrigeminal cistern, cistern of the great cerebral vein)



A photograph of a formalin-fixed human brain specimen, viewed from a coronal section. The specimen is placed in a white tray. A small, rectangular white label is pinned to the brain tissue, identifying the anatomical structure shown. The label reads:  
st. cistern of the  
corpus callosum



6g. superior cistern (quadrigeminal  
cistern, cistern of the great cerebral vein)

cerebellum

4th  
vent.

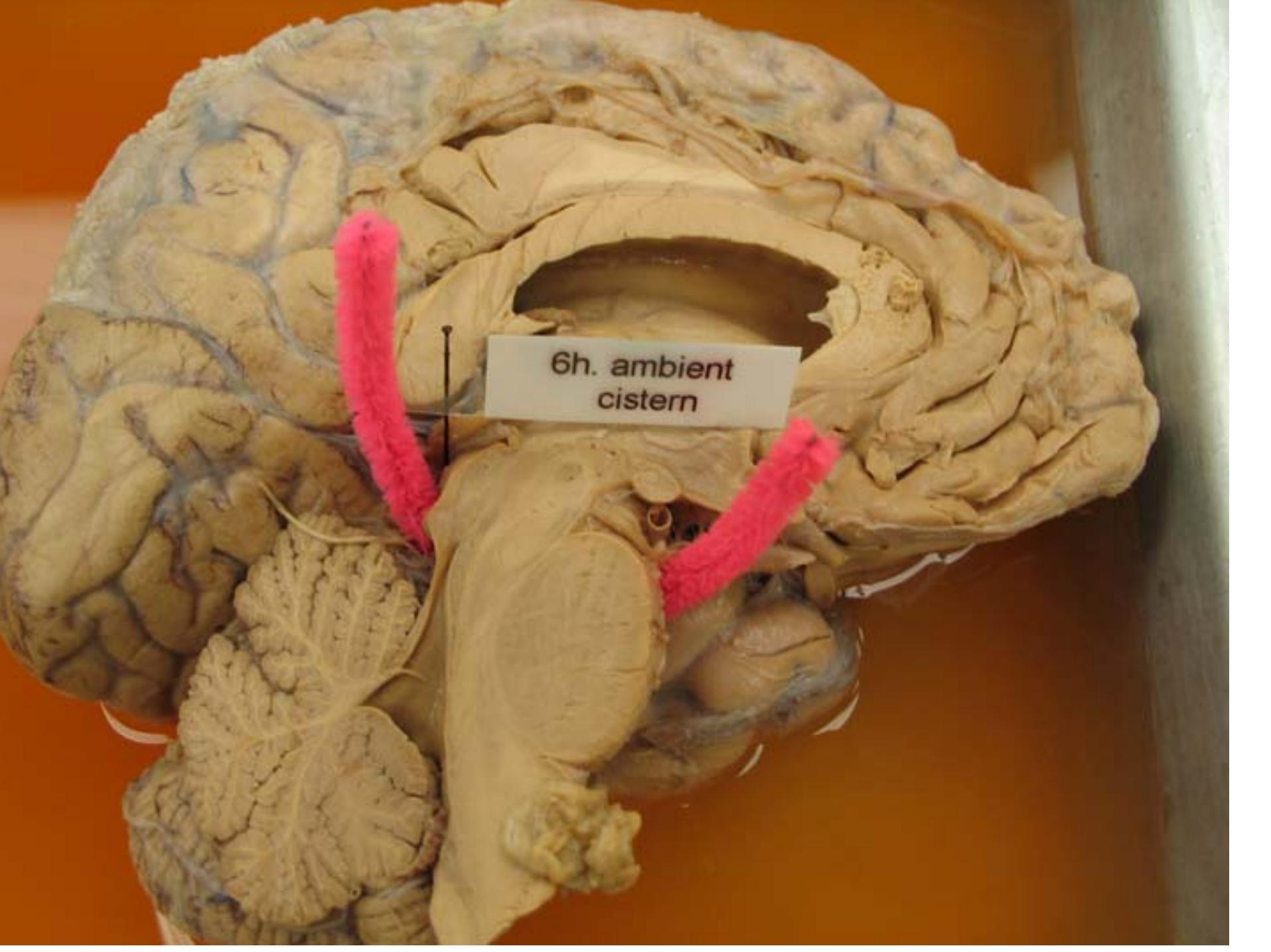
pons

tectum  
cerebral aqueduct  
midbrain tegmentum

6g. superior c  
cistern, cist

50 SURFACE SECTION OF THE BRAIN (QUADRUPEDAL)

50 SURFACE SECTION OF THE BRAIN (QUADRUPEDAL)



A photograph of a formalin-fixed human brain specimen. The brain is viewed from a lateral perspective, showing the cerebral cortex, white matter tracts, and ventricular system. A large, irregularly shaped cavity, the ambient cistern, is visible between the temporal lobe and the cerebellum. Two bright pink, textured sticks are placed into the cistern to highlight its shape. A small, rectangular white label is positioned above the cistern, containing the text "6h. ambient cistern".

6h. ambient  
cistern

6h. ambient  
cistern

This anatomical diagram shows a cross-section of the brainstem and surrounding structures. A white rectangular label is positioned in the upper central area, identifying the '6h. ambient cistern'. Two thick red lines, resembling stylized fur or hair, run vertically along the left and right sides of the image. A small black vertical line is located near the top center of the label. The underlying tissue is a light tan color with various folds and recesses.

4th  
vent.

pons



6i. cistern of the  
lateral sulcus





6i. cistern of the  
lateral sulcus

A close-up photograph of a brain hemisphere, likely a non-human primate or large animal, showing the gyral and sulcal pattern. A small, light-colored rectangular label is placed above the lateral sulcus. A thin black line connects the top of the label to a small black dot on the brain surface, indicating the location of the cistern. The brain tissue is a pale yellowish-tan color.

6i. cistern of the  
lateral sulcus

A photograph of a preserved anatomical specimen, likely a human brainstem and cerebellum preparation. The specimen is mounted on a wooden block and is partially covered by a white cloth. A small, white, rectangular label is pinned to the specimen with two blue pins. The label contains the following text:

6j. cerebellopontine cisterns  
(superior and inferior)



6j. cerebellopontine cisterns  
(superior and inferior)

2n. Cauda  
equina

6k.lumbar cistern  
(spinal cistern)



Gl. arachnoid villi  
(granulations)