Case #95

NAME Educational Activities Committee

Case provided by:

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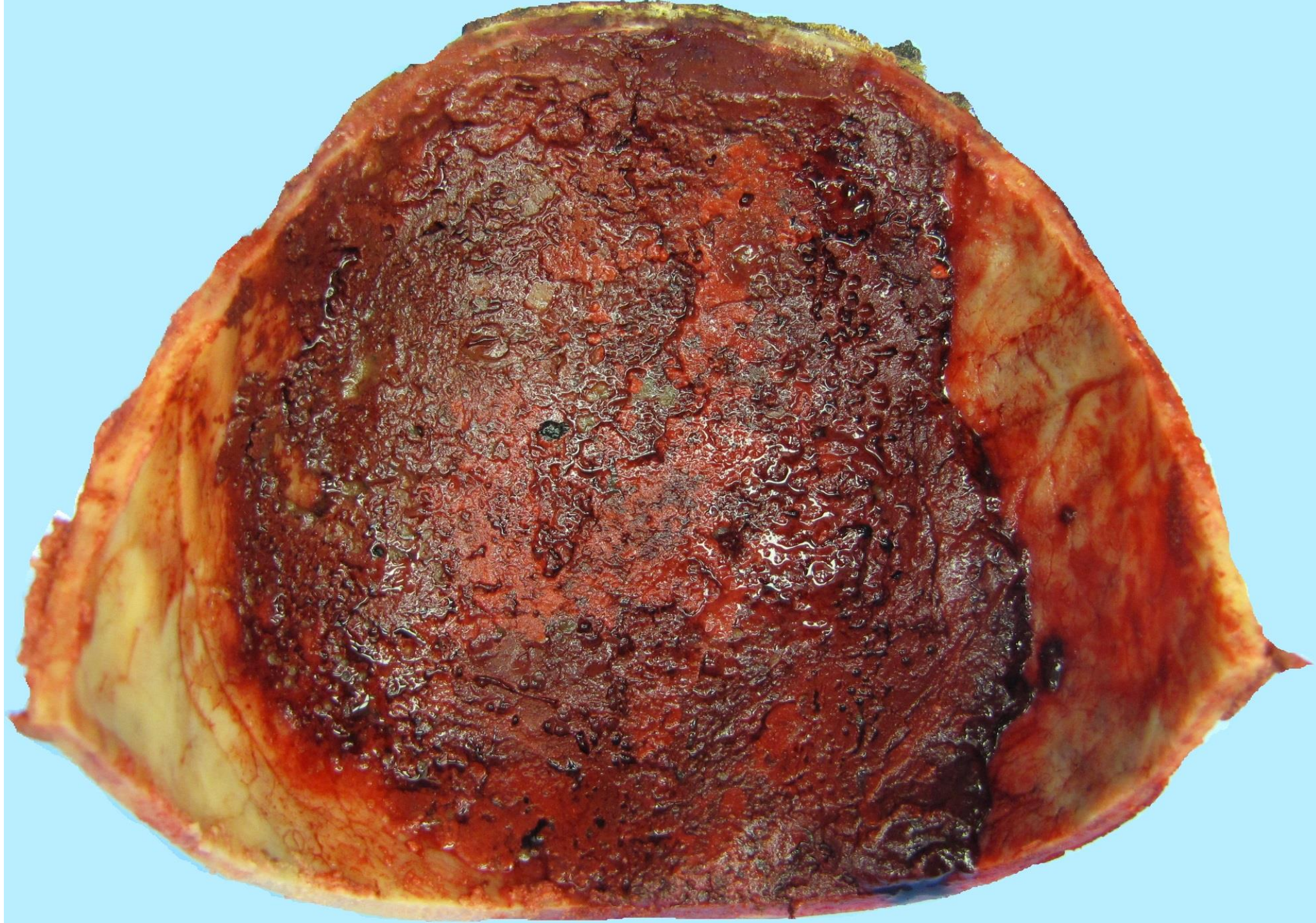

An unidentified adult male was recovered from the driver seat of a car that burst into flames when it collided with another vehicle. The autopsy finding seen in Image 1 is most likely due to:

A. Middle meningeal artery laceration
B. Bridging vein laceration
C. Intracerebral hemorrhage with ventricular extension
D. Thermal injury

Answer...

D. Thermal injury (88.05% responses)

The body found in the vehicle was severely charred. Charred remains in motor vehicle accidents can sometimes presents challenges in identifying true trauma from thermal artifact. In cases like this, collections of epidural blood may raise the suspicion for blunt force trauma. However, heating of the calvarium will commonly produce this artifact. It is suggested that heat forces blood out of the marrow and between the inner table of the skull and the dura.

Whereas epidural collections of blood are common artifacts in charred remains, subdural blood would typically be related to trauma.

Other responses…

A. Middle meningeal artery laceration (3.71% responses)
Fractures of the temporal bones may result in a laceration of the middle meningeal arteries. This injury is commonly associated with epidural hematomas.

B. Bridging vein laceration (3.16% responses)
Lacerations of the bridging veins are classically described as being associated with subdural hematomas.

C. Intracerebral hemorrhage with ventricular extension (5.08% responses)
Intracerebral (intraparenchymal) hemorrhages within the central portions of the brain (e.g. basal ganglia, thalamus) may be large enough to extend into the lateral ventricles. This produces subarachnoid hemorrhage, most prominent along the base of the brain and cerebellum as the ventricular blood exits the foramina of Luschka and Magendie. The most common cause of this phenomenon is hypertension.

REFERENCES

1. Dolinak, Matshes, and Lew, *Environmental Injury*, in Forensic Pathology: Principles and Practice, D. Dolinak, M.D., EW Matshes, M.D., E.O. Lew, M.D., editors. 2005, Elsevier Academic Press, Burlington MA.