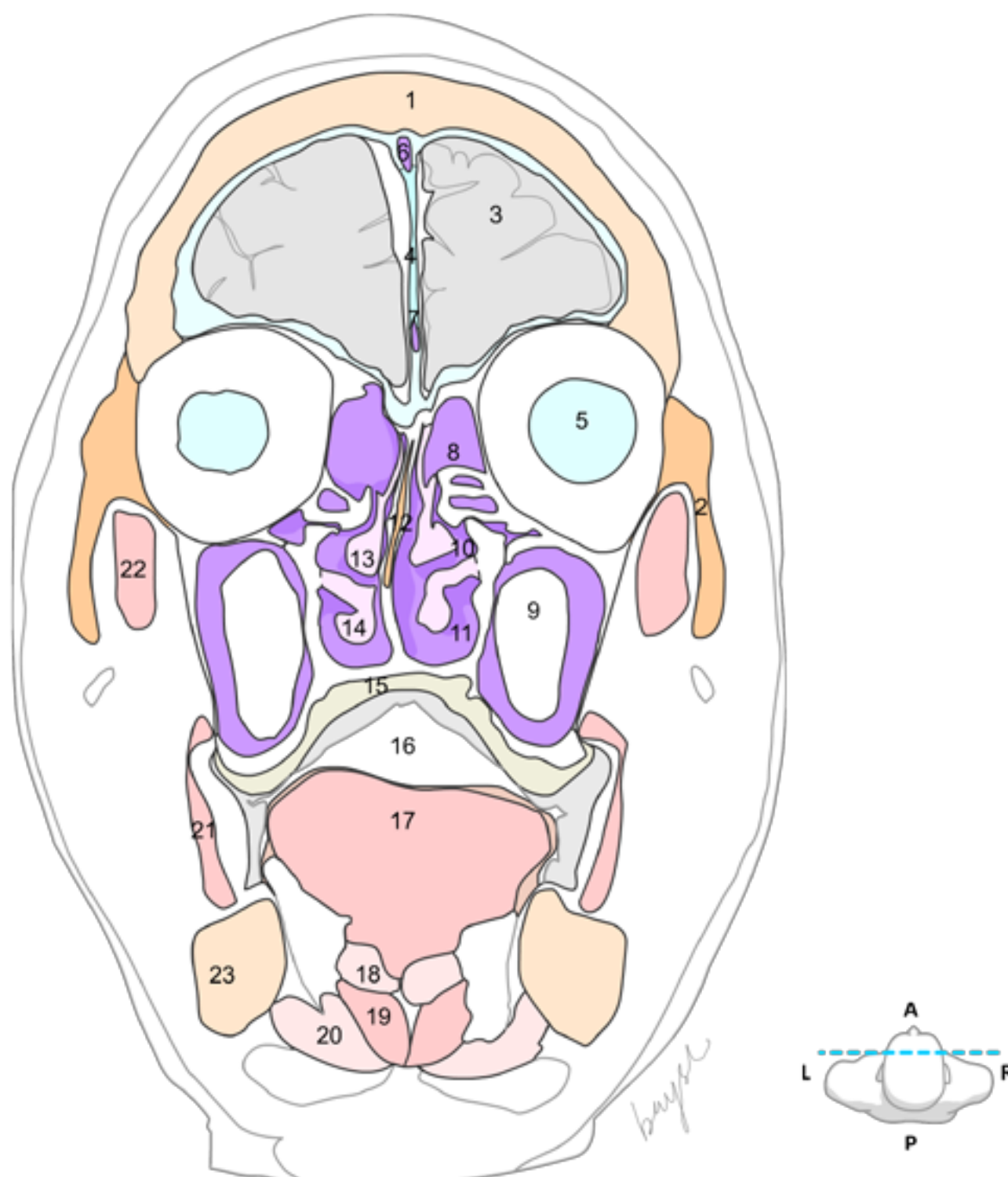


NASAL CAVITIES AND PARANASAL AIR SINUSES



Posterior aspect, showing the coronal section of the orbit, nasal and oral cavities.

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|----------------------|-------|----------------------------|
| | 1. | Frontal bone |
| | 2. | Zygomatic bone |
| | 3. | Frontal lobe |
| | 4. | Falx cerebri |
| | 5. | Orbit |
| Dural venous sinuses | [6. | Superior sagittal sinus |
| | [7. | Inferior sagittal sinus |
| Paranasal sinuses | [8. | Ethmoidal sinus (air cell) |
| | [9. | Maxillary sinus |
| Nasal cavity | [10. | Middle nasal meatus |
| | [11. | Inferior nasal meatus |
| | [12. | Nasal septum |
| | [13. | Middle concha |
| | [14. | Inferior concha |
| | 15. | Hard palate |
| | 16. | Oral cavity |
| Muscles | [17. | Body of tongue |
| | [18. | Genioglossus muscle |
| | [19. | Geniohyoid muscle |
| | [20. | Mylohyoid muscle |
| | [21. | Buccinator muscle |
| | [22. | Temporalis muscle |
| | [23. | Mandible |

The paired nasal cavities lie medial to the orbits and the maxillary sinuses. Each cavity is partially subdivided by three shelf-like projections from the lateral wall, the superior, middle and inferior conchae. Inferior and lateral to each of these bony shelves is a space – the superior, middle and inferior meatus.

The paranasal sinuses are air-filled extensions of the respiratory part of the nasal cavity into the following cranial bones: frontal, ethmoid, sphenoid and maxilla.

CLINICAL CONSIDERATIONS

Infection may spread from the nasal cavities, producing inflammation and swelling of the mucosa of the sinuses (sinusitis) and local pain. Sometimes several sinuses are inflamed (pansinusitis), and the mucosa may block one or openings of the sinuses into the nasal cavities. The maxillary sinuses are the most commonly infected.

Question(s)

- *What is the lining epithelium of the nasal cavity and paranasal sinuses?*
- *What is the sensory innervation of the nasal cavity and paranasal sinuses?*
- *What is the arterial supply to the lateral nasal wall and nasal septum?*
- *Where is the common site of nose bleeding (epistaxis)?*
- *What are the functions of the nasal cavity? Correlate the histological features of nasal walls with its functions.*