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Pathology Review

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Chapter 16: Neurological and Muscular Pathology

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56. What are the most common sites of occurrence of saccular aneurysms?

- Middle cerebral artery trifurcation — 34%.
- Anterior communicating artery.
- Anterior cerebral artery junction — 40%.
- Internal carotid artery.
- Posterior communicating artery junction — 20%.
- Basilar posterior cerebral arteries.

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68. List three microorganisms responsible for opportunistic infections of the brain in HIV infection.

- Toxoplasmosis encephalitis.
- Cytomegalovirus.
- Cryptococcal meningitis.
- Tuberculosis meningoencephalitis.
- JC virus (progressive multifocal leukoencephalopathy – PML).
- Pneumocystis carinii (very rare).

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84. Name at least five neurological diseases that have neurofibrillary tangles.

- Progressive supranuclear palsy.
- Corticobasal degeneration.
- Subacute sclerosing panencephalitis.

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- Tuberous sclerosis.
- Gerstmann-Straussler-Scheinker disease.
- Niemann-Pick disease type C.
- Meningioangiomatosis.
- Postencephalic Parkinson disease.
- Parkinsonian dementia complex of Guam.
- Alzheimer's disease.

86. Name at least three diseases that clinically exhibit parkinsonism.

- Multiple system atrophy.
- Progressive supranuclear palsy.
- Corticobasal degeneration.
- Frontotemporal dementia with parkinsonism linked to chromosome 17.
- Postencephalic Parkinson disease.
- Parkinsonian dementia complex of Guam.
- Parkinson's disease, including inherited forms.

88. Describe Lewy bodies.

- Single or multiple cytoplasmic, eosinophilic, round to elongated inclusions with a dense core surrounded by a pale halo.
- Composed of intermediate filaments and -synuclein.
- Cortical Lewy bodies: intraneuronal, eosinophilic, rounded to oval inclusions in lower layers of cortex, usually without halos.

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119. Name the common microscopic features of meningioma.

- Tumor cells that form lobules, some partly demarcated by thin collagenous septae.
- Whorls.
- Psammoma bodies.
- Cells arranged in a syncytium.
- Bland, round-to-oval nuclei that can contain pale cytoplasmic pseudoinclusions.

122. List the IHC stains that are helpful in distinguishing meningioma from schwannoma.

- Epithelial membrane antigen (EMA) – positive in meningioma and negative in schwannoma.
- S100 protein – strong and diffusely positive in schwannoma, but focal, patchy, or minimally staining in meningioma.

123. Name the three most common tumors that can develop in the sella turcica.

- Pituitary adenoma.
- Craniopharyngioma.
- Rathke cleft cyst.
- Meiningioma.