

"SECTION A"

QUESTION 1:-

(A) POSSIBLE DIAGNOSIS:-

CVA can be:-

1) Ischemic:-

Common causes:-
Thrombosis and embolic occlusion
of major vessels.

2) Hemorrhagic:-

=> Bleeding from an arterial source
into brain.

=> Regarding as most deadliest
sub type.

3) ISCHEMIC CVA:-

=> Sudden difficulty speaking or
understanding speech.

=> Sudden severe headache.

=> Unexplained dizziness, unsteadiness,
falls.

* CVA RISK FACTORS:-

1) Hypertension.

2) Diabetes mellitus.

3) Cardiovascular disease.

4) Elevated blood lipids

5) Obesity.

6) Cigarette Smoking.

7) Age

8) Race

(B) If the left side of the patient's brain is damaged, which visual field will be lost and why?

* WARNING SIGNS OF CVA:-

1) Sudden weakness or numbness in face, arm, leg.

2) Sudden dimness or loss of vision understanding speech.

3) Sudden severe headache.

4) Unexplained dizziness, unsteadiness, falls.

* QUESTION 2:-

(A) Name the protein that penetrates the neuron's membrane and causes

damage to the brain leading to Alzheimer's disease?

* (A) AMYLOID PRECURSOR PROTEIN:-

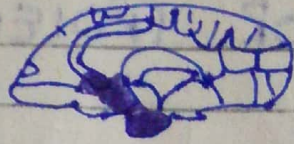
⇒ Alzheimer's disease has been identified as a protein misfolding disease (proteopathy) caused by a accumulation of abnormally folded A-Beta and tau proteins in the brain, Plaques are made up of small peptides, 39, 43 aminoacids in length, called Beta-amyloid (also written as A-Beta or AB)

⇒ Beta-amyloid is a fragment from a larger protein called amyloid precursor protein (APP) a transmembrane protein that penetrates through the neuron's membrane.

⇒ APP is critical to neuron growth, survival and post-surgery repair, in Alzheimer's disease, an unknown process causes (APP) to be divided into smaller fragments by enzymes through proteolysis.

⇒ One of these fragments gives rise to fibrils of beta-amyloid which form clumps that deposit outside neurons in dense formations known as senile plaques.

* STAGES OF ALZHEIMER'S DISEASE



Very Early AD.



Mild to Moderate AD.



Severe AD

⇒ As Alzheimer's disease progresses, neurofibrillary tangles spread throughout the brain (shown in blue). Plaques also spread throughout the brain, starting in the neocortex. By the final stage, damage is widespread and brain tissue has shrunk significantly.

B) Which disease is caused if there is a mutation in SOD1 gene?

* CEREBROVASCULAR DISEASE

⇒ Cerebral vascular accident (CVA):-

-) Devastating vascular event which results in destruction of

surrounding brain tissue.

o) leading cause of serious long disability

*) CVA Risk Factors:-

1) Hypertension.

2) Diabetes mellitus.

3) Cardiovascular disease.

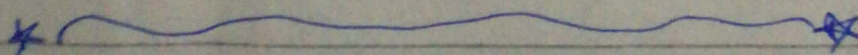
4) Elevated blood lipids

5) Obesity.

6) cigarette smoking.

7) Age.

8) Race.



SECTION "B"

* MCQs:-

- | | | | |
|-----|-----|-----|-----|
| 1) | (C) | 2) | (C) |
| 3) | (B) | 4) | (A) |
| 5) | (B) | 6) | (A) |
| 7) | (A) | 8) | (A) |
| 9) | (C) | 10) | (B) |
| 11) | (D) | 12) | (C) |
| 13) | (D) | 14) | (B) |
| 15) | (D) | 16) | (B) |
| 17) | (B) | 18) | (C) |
| 19) | (E) | 20) | (E) |
| 21) | (C) | 22) | (E) |
| 23) | (C) | 24) | (A) |
| 25) | (D) | 26) | (A) |
| 27) | (A) | 28) | (B) |
| 29) | (B) | 30) | (B) |