Stroke (Apoplexy)

- Acute Focal neurological deficit due to the vascular disease lasting more than 24 hours.

Stroke

Vascular
- Arterial > 99%
- Venous <1%

Pathology
- Infract 85%
- Hemorrhage 15%
- Infract

Site
- Anterior (Carotid Circulation) 65%
- Posterior (vertebro basilar) 20%
- Brain Parenchya 10%
- Subarchnoid space 5%
- Venous Syste

clinical classification
- Total anterior circulation stroke (TACS)
- Partial anterior circulation stroke (PACS)
- Lacunar stroke (LACS)
- Posterior circulation stroke (POCS) 20%
- Sub archnoid Hemorrhage
- Central venous Thrombo

Pathophysiology
- Embolism
- Thrombosis in situ.
- Thrombosis in situ
- Thrombosis embolism
- Intra Cerebral Hemorrhage
- Thrombo in situ

- Vascular degenartion
- Aneurysm
- Arterio Venous malformation

Risk Factors

Unmodifiable
1) Age
2) Gender (male > Female)
3) Race (Afro Caribbean > Asian)
4) Heridity.
5) Sickle cell disease
6) Perevious Vascular Events. (MI, Stroke,)

Modifiable
1) BP
2) Cigaratte smoking
3) Hyperlipidemia
4) Diabetes.
5) Alcohol.
6) Oestrogen Containg pills
6) Heart disease

Pathophysiology

Infarct:

Ischemia (Atherosclerosis)
↓
Collaterals try to form (CTIA).
↓
No delivery of O_2
↓
↑ Na^+ → Cells Swell (Cytotoxic Edema)
↓
↑ Ca^{2+} → Build up of Reactive oxygen species.

Releases Apoptosis inducing factors and degrative enzymes.
↓
Inflammation of BBB
↓
Vasogenic Edema
↓
Mass Effects
↓
Herniation.

Falx Cerebri
Tentorium Cerebelli
Foramen Magnum

Broca's Area → Slurred Speech
Wernicke's Area → Difficulty understanding Speech

Hemorrhage

Hemorrhage
↓
Pressure effects of the Skull, Brain, Blood vessel,
↓
Herniation.
↓
Neurological deficits.

Clinical Features

- Sudden onset of symptoms, affects identifiable area of brain and is 'negative' in characteristic abrupt loss of function, without positive features such as abnormal movement.
- Weakness, Speech, Visual, Headache, Seizure, Coma.

Stroke should be treated quickly and Spreading awareness.

F - Facial Drooping

A - Arm weakness.

S → Speech difficulties.

T → Time (Act help quickly).

Clinical syndrome

1) TACS → Hemiparesis, Hogkin Cerebral dysfunction, Hemisensory loss. Homonymous Hemianopia.

2) PACS → Isolated motor loss; Isolated Cerbral dysfunction, Mixture of Both.

3) LACS → Pure motor two limbs
↓
Small → Pure sensory.
Perforating → Sensory motor loss
artery → No higher Cerebral dysfunction or Hemianopia

4) POCS → Homonymous Hemianopia. Cranial nerve syndrome. Cerebellar Syndrome.

Transient Ischemic attack

- A stroke in which symptoms within 24 hours.
- Usually shows No ischemia on MRI
- Practically it is of little value because more than 1 hour it always cause stroke.
→ TIA also includes amaurosis fugax usually due to vascular occlusion of retina

Investigation → CBC, Electrolytes, Glucose, lipids, ECG, CT, MRI, Angiography.

→ No visible Impacts.

A → Age
B → Blood Pressure
C → Clinical Features
D → Duration
2 → Diabetes II

} Shows the risk of reoccurrence of stroke.

→ Low Scores 1-3 → No hospitalization.

→ 4-7 → Hospitilized and monitored

Investigation:

CT/MRI → Vascular: Brain, Hemorrhage, Infarct.

Lumbar puncture → Subarachoid Hemorrhage.

ECG → Atrial Fibrillation.

~~Dis~~ Angiography → Carotids.

CBC, Cholestrol, Glucose → Risk Factors.

PTT, PT, INR, Platlet → Thrombophilia.

ESR & CRP → Vasculitis.

O_2 saturation,