

STROKE

Definition and types

- Abrupt onset of a neurologic deficit that is attributable to a focal vascular cause
- Ischemic stroke
- Hemorrhagic stroke

RISK FACTORS

- | | |
|---|---|
| <ul style="list-style-type: none"> • Non-modifiable – Age – Gender (male > female, except in the very young and very old) – Race (Afro-Caribbean > Asian > European) – Heredity – Previous vascular event, e.g. myocardial infarction, stroke or peripheral embolism – High fibrinogen | <ul style="list-style-type: none"> • Modifiable – High blood pressure – Heart disease (atrial fibrillation, heart failure, endocarditis) – Diabetes mellitus – Hyperlipidaemia – Smoking – Excess alcohol consumption – Polycythaemia – Oral contraceptives – Social deprivation |
|---|---|

Causes-Ischemic stroke

- | | |
|---|---|
| <ul style="list-style-type: none"> • Thrombosis <ul style="list-style-type: none"> – Lacunar stroke (small vessel) – Large vessel thrombosis – Dehydration | <ul style="list-style-type: none"> • Embolic occlusion <ul style="list-style-type: none"> – Artery-to-artery <ul style="list-style-type: none"> • Carotid bifurcation – Cardioembolic <ul style="list-style-type: none"> • Atrial fibrillation • Mural thrombus • Myocardial infarction • Dilated cardiomyopathy • Valvular lesions <ul style="list-style-type: none"> – Mitral stenosis – Mechanical valve – Bacterial endocarditis • Paradoxical embolus <ul style="list-style-type: none"> – Atrial septal defect – Patent foramen ovale |
|---|---|

Causes-Hemorrhagic stroke

- Head trauma
- Hypertensive hemorrhage
- Transformation of prior ischemic infarction
- Metastatic brain tumor
- Coagulopathy
- Drug-----Cocaine, amphetamine
- Arteriovenous malformation
- Aneurysm

Clinical Presentation

- **Transient ischaemic attack (TIA).**
 - Symptoms resolve within 24 and no neurological deficit remains
- **Progressing stroke (or stroke in evolution)**
 - Focal neurological deficit worsens after the patient first presents---due to increasing volume of infarction, haemorrhage or related oedema.
- **Completed stroke**
 - Focal deficit persists and is not progressing.

DIFFERENTIAL DIAGNOSIS OF STROKE AND TIA

- Primary cerebral tumours
- Metastatic cerebral tumours
- Subdural haematoma
- Cerebral abscess
- Todd's paresis (after epileptic seizure)
- Demyelination
- Hypoglycaemia
- Encephalitis
- Conversion disorder
- Migrainous aura (with or without headache)
- Focal seizures

GENERAL EXAMINATION OF STROKE PATIENTS

Skin

- Xanthelasma
- Rashes (arteritis, splinter haemorrhages, livedo reticularis)
- Limb ischaemia/deep venous thrombosis

Eyes

- Diabetic changes
- Hypertensive changes
- Arcus senilis

Cardiovascular system

- Blood pressure (hypertension, hypotension)
- Heart rhythm (atrial fibrillation)
- Murmurs (sources of embolism)
- Jugular venous pressure (heart failure, hypovolaemia)
- Peripheral pulses and bruits (generalised arteriopathy)

Respiratory system

- Respiratory infection

Abdomen

Urinary retention

- Of patients presenting with a stroke, 85% will have sustained a cerebral infarction due to inadequate blood flow to part of the brain.

Symptoms

- Higher mental deficit
- Hemiparesis
- Hemianopia
- Aphasia

Stroke in young

- Cardiac embolism
- Premature atherosclerosis
- Antiphospholipid antibody syndrome
- Thrombophilia
- Vasculitis
- SLE

- Arteriovenous malformation
- Aneurysm
- Coagulopathy
- Drug misuse

- ### Investigations
- CT Scan / MRI brain
 - Carotid Doppler
 - Echocardiography
 - ESR

- ### Complications
- Aspiration pneumonia
 - Urinary tract infection
 - Bed sore
 - Deep venous thrombosis

- ### Treatment
- Thrombolysis
 - Antiplatelet
 - Statin
 - Carotid endarterectomy

Supportive
Prevention of bed sore
Prevention of aspiration
Prevention of UTI