



# *Hemiplegia : History Taking*

*By*

*Prof Dr Bashir Ahmed Dar*

*Chinki Pora Sopore Kashmir*

*Email:drbashir123@gmail.com*







## Note

- *This slide presentation on hemiplegia is divided into three parts*
- *Part one deals with history taking*
- *Part two deals with localization of lesion*
- *Part three is on management of hemiplegia*
- *You cant appreciate or have clear concept unless you read all three parts of this presentation*
- *70% diagnosis is made only by history taking*

## *History Of Weakness*

- *Find out what does the Patient mean by weakness?*
- *Patients may have a difficult time defining their weakness. Patients may state that “I just do not feel right” or “I am lethargic”*
- *Before you proceed further try to know difference between true weakness and fatigue*

## *True Weakness?*

- *Inability to perform what you want to do with a muscle, even the first time or repeated times or how hard you may try, the force/strength or power exerted by the muscles is less than would be expected*
- *In other words the true muscle weakness is when the power of muscles is decreased below grade 5 that can be found on examination*

# *Fatigue?*

- On the other hand fatigue is symptom referred to as tiredness, exhaustion, lethargy, or asthenia even used as weakness by the patient
- Fatigue is thus a symptom, and not a sign often used by patient as weakness.
- On examination there will not be any decrease in power of muscles

# *Fatigue?*

- *Fatigue is transient inability of a muscle to perform physical activity*
- *Unlike true weakness, fatigue can be relieved by periods of rest and is made more severe by intense physical exercise*

## *Questions To Be Asked?*

- *First of all ask about*
- *Time of onset*
- *Mode of onset*
- *Distribution and pattern of weakness*

## *Time Of Onset*

- *What time weakness started. Was it morning ,noon or after noon, evening or night or was weakness noted when patient woke up from sleep etc*
- *The exact time when weakness first started*
- *Asking about time has medico legal importance and when you know about beginning and end then only you can say about course or progress of weakness*

## *Mode Of Onset ?*

- *Under what conditions weakness started was patient at home or at some work*
- *What exactly was he doing just before weakness started*
- *Was he on travel, any anger or quarrel before weakness etc*
- *Was he bedridden and not active and sleeping*

## *Mode Of Onset ?*

- *Is weakness sudden or gradual (Acute, Subacute, or Chronic)*
- *Was it preceded by any fever, rigors or chills*

## *Distribution & Pattern Of Weakness*

- *Is weakness unilateral or bilateral? Does it involve a single extremity or both? Does it involve one side of the body?*
- *Or does it involve only one part of the body or whole body*

## *Distribution & Pattern Of Weakness*

- *Weakness is it equal and same and uniform in upper and lower limbs or is it dissociative one limb more weak than the other ,arm weakness more than legs and vice versa*
- *Try to find out pattern & distribution of such weakness*

## *Distribution & Pattern Of Weakness*

- *Can patient comb or raise his arm above the head (Proximal muscle weakness)*
- *Is patient able to button and unbutton his dress ,hold objects in hand, able to write, open door or lock or hold keys , in short able to do different kind of work by his hands (Distal muscle weakness)*

## *Distribution & Pattern Of Weakness*

- *Can he clear the foot from ground and able to wear his shoes or does he drag his foot. Has he any difficulty standing on his or her toes (Distal muscle weakness)*
- *If the patient has difficulty rising from a chair or from sitting position (hip muscles) then weakness is in proximal muscles of leg*

## *Distribution & Pattern Of Weakness*

- Ask about writing with a pen, tying shoe lace, using comb/tooth brush, dressing
- Ask about any difficulty to lift the foot in front of the other and difficulty in walking
- Trunk: Difficulty in turning over in bed, in getting on to bed, in seating himself on a chair or lavatory seat.

## *Distribution & Pattern Of Weakness*

- *Is the patient dropping things or having difficulty with fine motor tasks like playing piano , guitar , difficulty using phone or computer?*
- *How does he go to washroom, does he take support of a stick or of a wall while trying to walk or does he take support of an other person*
- *How does he manage to eat or drink ask every thing*

## *Distribution & Pattern Of Weakness*

- Is the weakness continuous, or does the patient notice that symptoms are worse at certain times of day or in certain scenarios?
- Does the weakness remain same as at time of start or it progressed or did it improve
- Ask for factors that worsen weakness
- Ask how was patient brought to hospital and at what time

## *Distribution & Pattern Of Weakness*

- *Many neurological diseases cause both proximal and distal weakness, but one pattern may be more prominent at times*
- *History of any cranial nerve involvement*

# *Systemic Review*

- Ask about Symptomatology of all systems
- Ask about higher functions of brain about his orientation in time space and with person
- Memory ,calculations ,judgment , alertness
- Can he recognise his relatives and about his general knowledge
- How does he communicate with others

# *Systemic Review*

- Ask about any problems with vision, taste and hearing
- Any problem in bowel and micturition or disturbance in sleep
- Any anti social behaviour
- How does he speak ,swallow and eat and drink

# *Systemic Review*

- Ask about sensory changes or parasthesias like tingling ,pinpricks , hot or cold sensation, burning or numbness or heaviness in any part of body or like crawling of insects under the skin, any aches or pains
- Ask about seizures and any involuntary moments or headaches and neck stiffness

# *Systemic Review*

- *Respiratory system- breathlessness, haemoptysis , cough and expectoration, foul smelling breath*
- *GIT- any nausea vomitting,difficulty in swallowing,flatulence,distention,loose motion or constipation, pain abdomen ,any heartburn or acid regurgitation*

# *Systemic Review*

- CVS-any palpitations ,shortness of breath, paroxysmal nocturnal dyspnea, chest pain ,syncopal attacks, swelling of feet

# *Systemic Review*

- *Renal-any edema of face or feet, burning or painful micturition, or increase or decrease in frequency and volume of urine, any lumber pains, any pain from loin to groin, any colicky type of pain*
- *Any history of fluid loss and dehydration*

# *Systemic Review*

- *Haematological – bleeding gums,epistaxis,skin petiche,purpura,bleeding per rectum or vagina,haematuria,echimosis or bruises*
- *Any history of blood loss or transfusion*
- *History of lethargy and fatigability*

# *Systemic Review*

- *Hepato-biliary*
- *Any jaundice, pain right hypochondrium, fullness after meals ,nausea and vomiting ,high coloured more yellowish urine*
- *Steatorrhea, clay coloured stools,rashes over skin due to prothrombin deficiency like petichie*

# *Systemic Review*

- *Collagen vascular diseases like SLE, RA and scleroderma- ask about joint pains which is a hallmark of such diseases*
- *Any skin rash , loss of hair*
- *Any low grade fever*
- *Involves multisystem*

# *Systemic Review*

- *Malignancy – ask for loss of appetite and loss of weight*
- *Rapid worsening of symptoms*
- *Wasting of muscles*

# *Systemic Review*

- *Tuberculosis*
- *Ask for BCG vaccination ,contact with TB patient ,Hygiene and overcrowding*
- *Evening rise of temperature*
- *Association with cows and unpasteurised milk*
- *Loss of weight and loss of appetite*

# *Systemic Review*

- Ask about diabetes like polyuria, polydipsia, polyphagia
- h/o of hypertension, allergy , itching & sneezing or bleeding tendencies or disorders
- Any history of drug or poison intake or bite by snake or tick
- Any history of sexual promiscuity

# *Causes Of Generalised Weakness?*

- *Ageing*
- *Anaemia*
- *Diabetes*
- *Hypothyroidism*
- *Hyperthyroidism*
- *Depression*
- *Anxiety*
- *Myasthenia gravis*
- *Sleep disorders*
- *Working late at night*
- *Jet lag*
- *Insomnia*
- *Chronic fatigue syndrome*
- *Fibromyalgia*
- *Cancers*

# *Causes Of Generalised Weakness?*

- *Infections*
- *Addison's disease*
- *Acromegaly*
- *Cushing's disease*
- *Obesity*
- *Vitamin deficiencies*
- *Liver disease*
- *Heart and Lung diseases*
- *Multisystem diseases*
- *Sarcoidosis*
- *Amyloidosis*
- *Systemic lupus,*
- *Rheumatoid arthritis*
- *Mineral deficiencies,*
- *Poisoning*
- *Botulism*

# *Causes Of Generalised Weakness?*

- *TB (tuberculosis)*
- *Lymphomas*
- *Leukemia's*
- *AIDS/HIV*
- *Chronic heart disease*
- *Chronic lung disease*
- *Chronic liver disease*
- *Parkinson's disease*
- *Muscle wasting*
- *Myopathy*
- *Muscular dystrophies*
- *Multiple sclerosis (MS)*
- *Guillain-Barré syndrome*
- *Motor neurone disease*

# *Causes Of Generalised Weakness?*

- Medications like
- Antidepressants
- Anti hypertensive's
- Antihistamines
- Sedatives
- Anti-anxiety drugs
- Statins
- Cortico steroids
- Anti cancer drugs
- Dehydration and electrolyte disorders
- Anti-HIV Medications

## *Stroke (CVA)*

*Stroke is an act of sudden hitting or striking at someone or something; a blow, punch or slap.  
Stroke, also known as cerebrovascular accident  
Synonym(s): apoplexy or sudden brain attack*

## *Stroke (CVA)*

*Stroke occurs when the supply of blood to the brain is either interrupted or reduced. When this happens, the brain does not get enough oxygen or nutrients which causes brain cells to die resulting in various neurological deficits*

## *Stroke (CVA)*

*Symptoms of stroke depend on the region of the brain affected, a stroke may cause paralysis, speech impairment, loss or disturbance of higher functions, coma, or death. Any of the brain functions may be impaired*

# *Risk factors for stroke?*

- *High blood pressure*
- *Chronic kidney disease*
- *Smoking*
- *Diabetes*
- *Heart disease - Congenital or Acquired*
- *Brain aneurysms*
- *Age and gender. Risk of stroke increases as you get older*
- *At younger ages, men are more likely than women to have strokes*
- *Personal or family history of stroke or TIA*

# *Risk factors for stroke?*

- *Unhealthy diet/  
Obesity/Hyper Lipids*
- *Unhealthy cholesterol  
levels*
- *Lack of physical  
activity*
- *Other risk factors for  
stroke are*
- *Alcohol and illegal drug  
use, including cocaine,  
amphetamines, and  
other drugs*

# *Risk factors for stroke?*

- *Certain medical conditions, such as sickle cell anemia, vasculitis , inflammation of the blood vessels), and bleeding disorders*
- *Hyperhomocysteinemia*
- *Increased levels of fibrinogen*
- *Asymptomatic Carotid Stenosis*
- *Oral Contraceptives*
- *Stress and depression*

# *Risk factors for stroke?*

- *Illicit Drug Use*
- *Heroin*
- *LSD*
- *Cold remedies (eg, phenylpropanolamine)*  
*Amphetamines,*  
*Ephedrine, and*  
*Pseudoephedrine*
- *Following a healthy lifestyle can lower the risk of stroke.*
- *Poor diet and lack of exercise*
- *PCP*
- *T's and Blues*
- *Marijuana*

# *Causes of Stroke?*

- *Cerebral hemorrhage*
- *Cerebral embolism*
- *Cerebral thrombosis*
- *Subarachnoid hemorrhage*
- *Extradural hemorrhage or hematoma*
- *Migraine*
- *Intra dural hemorrhage or hematoma*
- *TIA*
- *AV Malformation*
- *Aneurysm*
- *Vertebro basilar insufficiency*

# *Questions to be asked for Cerebral hemorrhage?*

- Did it happen after activity
- Nausea and vomiting
- Loss of consciousness
- Blood thinner therapy:  
Drugs such as
  - Coumadin
  - Heparin, and warfarin
  - Cocaine and other illicit drugs
- H/O Bleeding disorders: hemophilia, sickle cell anemia, DIC, thrombocytopenia
- H/O Petechial rashes, purpura, echymosis or bruises
- H/O Bleeding gums, Epistaxis, Melena or
- Hemoptysis
- Any severe head ache

# *Causes and Risk Factors Cerebral Thrombosis?*

- ***Genetic Prothrombotic Conditions***
- *Factor V Leiden mutation*
- *Prothrombin mutation*
- *Hyperhomocysteinemia caused by gene mutations*
- *Hypercoagulable states associated with the antiphospholipid syndrome*
- *And thrombophilia, including protein S and C deficiencies, antithrombin III deficiency*

# *Causes and Risk Factors Cerebral Thrombosis?*

- ***Acquired Prothrombotic States***
- *Fatty deposits in vessels (atheroma) or Atherosclerosis*
- *Pregnancy*
- *Leukemia*
- *High fibrinogen*
- *Smoking*
- *Diabetes mellitus*
- *Hypercholesterolemia*
- *Obesity*
- *Immobilisation*
- *Thrombocythemia*
- *Polycythemia*
- *Puerperium*

# *Causes and Risk Factors Cerebral Thrombosis?*

- ***Acquired Prothrombotic States***
- Collagen vascular diseases like
- *Systemic lupus erythematosus*
- *Wegener's granulomatosis*
- *Nephrotic syndrome*
- *Antiphospholipid antibodies*
- *Sarcoidosis*
- *Neurosurgical procedures*
- *Behçet's syndrome*
- *Rheumatoid arthritis*

# *Causes and Risk Factors Cerebral Thrombosis?*

- ***Acquired Prothrombotic States***
- *Local Infections like*
- *Otitis*
- *Mastoiditis*
- *Sinusitis*
- *Meningitis*
- *Trauma*
- *Paroxysmal nocturnal hemoglobinuria*
- *Oral contraceptives*
- *Asparaginase*
- *Cancers*
- *Jugular catheterization*
- *Dehydration*
- *Head injury*

# *Questions to be asked for Cerebral Thrombosis?*

- *Do you have stroke in evolution" pattern?*
- *Progressive deterioration of motor and sensory function*
- *Signs and symptoms peak when edema develops, usually about 72 hours after the onset of the thrombotic event*
- *Stroke may continue to worsen for several hours to a day or two as a steadily enlarging area of the brain dies*
- *For example hand first then arm and then leg etc*
- *All this called as Stroke in evolution*

# *Questions to be asked for Cerebral Thrombosis?*

- *Cerebral thrombosis occurs most often at night or early in the morning*
- *Often preceded by a transient ischemic attack, or TIA, sometimes called a mini-stroke*
- *Progression is usually stepwise, interrupted by periods of stability*

# *Cerebral Embolism*

- Ask for source of embolism
- Congenital or acquired heart disease
- An embolism is the lodging of an embolus, which may be a blood clot, fat globule, gas bubble or foreign material in the bloodstream

# *Cerebral Embolism*

- *Amniotic embolism:*  
*Not all emboli are made of clotted blood. In pregnancy, the womb is filled with amniotic fluid, which protects the fetus.*
- *Amniotic fluid can embolize and reach the mother's lungs, causing pulmonary amniotic embolism*

# *Cerebral Embolism*

- *Air embolism: Scuba divers who rise to the surface too rapidly can generate air embolism, bubbles in the blood that can block arterial blood flow*
- *Fat embolism: If fat or bone marrow particles are introduced into the blood circulation, they may block blood vessels the way a blood clot or air bubble*

# *Cerebral Embolism*

- **Septic embolism:** This occurs when particles created by infection in the body reach the bloodstream and block blood vessels

# *Risk factors of Embolism?*

- *Prolonged bed rest*
- *Surgery*
- *Childbirth*
- *Cancer*
- *Obesity*
- *A broken hip or leg*
- *Oral contraceptives*
- *Sickle cell anemia*
- *Trauma*
- *Old age*

# *Risk factors of Embolism?*

- *Plane flight/Scuba diving*
- *Deep vein thrombosis*
- *Sedentary life style*
- *Bed ridden patients*
- *Dehydration*
- *Road traffic accident*
- *Patients with prosthetic valves*
- *Infective endocarditis*
- *Bone fractures*
- *Excessive alcohol*
- *Colds Medications*
- *Narcotics and antihistamines*

# *Epidural or Extradural hematoma*

- *Epidural or extradural hematoma (haematoma), also known as an epidural hemorrhage, is a type of traumatic brain injury (TBI) in which a buildup of blood occurs between the dura mater and the skull*

# *Epidural or Extradural hematoma*



# *Epidural or Extradural hematoma*

- *Epidural hematomas usually present with a Lucid period immediately following the trauma and a delay in symptoms become evident*

# *Epidural or Extradural hematoma*

- *Lucid interval is a temporary improvement in a patient's condition after a traumatic brain injury, after which the condition deteriorates*

# *Epidural or Extradural hematoma*

- *For a lucid interval to occur, a person suffers a head injury, for example, a blow to the head. They are knocked unconscious for a few minutes and then awaken*

# *Epidural or Extradural hematoma*

- *The person may be totally unaware of the seriousness of their condition.*
- *Awake and functioning normally, perhaps with a sore head that they associate with the knock they have received, they have an epidural hematoma progressing as minutes or hours go by then condition worsens and patient goes in coma and neurological deficit & raised ICP*

# *Subdural Haematoma*

- *The subdural space is the space between the dura mater and the arachnoid mater*
- *Acute - where the blood collects quickly after a head injury; symptoms can occur immediately or within hours*

# *Subdural Haematoma*

- *The symptoms of an acute subdural haematoma usually appear soon after a head injury. This may be minutes to within 24-48 hours*
- *Gradual progressive weakness*

# *Subdural Haematoma*

- *Pressure symptoms Raised ICP along with neurological deficits*
- *With increasingly progressive worsening of neurological deficits*

# *Subarachnoid Haemorrhage (SAH)*

- *Subarachnoid haemorrhage (SAH) is usually the result of bleeding from a berry aneurysm in the Circle of Willis.*
- *These are called berry aneurysms because of their shape*

# *Subarachnoid Haemorrhage (SAH)*

- *Subarachnoid hemorrhage can be caused by:*
- *Bleeding from an arteriovenous malformation (AVM)*
- *Bleeding disorder*
- *Bleeding from a cerebral aneurysm*
- *Head injury*
- *Unknown cause (idiopathic)*
- *Use of blood thinners*

# *Subarachnoid Haemorrhage (SAH)*

- *Patients usually become comatose or semi-comatose*
- *Congenital or may happen due to hypertension and atherosclerosis*

# *Subarachnoid Haemorrhage (SAH)*

- *The most characteristic feature is a sudden explosive headache.*
- *This may last a few seconds or even a fraction of a second.*
- *The patient may even look round and accuse someone of hitting him on the back of the head,*

***Thunderclap headache***

# *Subarachnoid Haemorrhage (SAH)*

- *Confusional state or Seizure*
- *Neck stiffness and other signs of meningism may be present, although it usually presents around six hours after onset of SAH*
- *There may be focal neurological signs, suggestive of a stroke. Complete or partial palsy of the oculomotor nerve is well recognised*

# *Subarachnoid Haemorrhage (SAH)*

- *Differential diagnosis*
- *Meningitis/Encephalitis*
- *Hypertensive encephalopathy*
- *Uremic encephalopathy*
- *Pituitary apoplexy (infarction or haemorrhage of the pituitary gland)*

# *Subarachnoid Haemorrhage (SAH)*

- *Besides other treatment one can give*
- *Calcium antagonists help to reduce vasospasm, that can follow after hemorrhage*
- *Nimodipine 60 mg four-hourly is generally used, as it has been shown to improve outcomes*

# *Subarachnoid Haemorrhage (SAH)*

- *Surgery may be done to:*
- *Remove large collections of blood or relieve pressure on the brain if the hemorrhage is due to an injury*
- *Repair the aneurysm if the hemorrhage is due to an aneurysm rupture*

## *Other Cerebrovascular Causes*

- *Cerebral aneurysm*
- *A-V Malformation*
- *Severe Migraine*
- *Vertebro-basilar insufficiency*
- *TIA*

# *Cerebral aneurysm & A-V Malformation*

- Ask about if symptoms from birth
- Usually occurs in children and young
- All other causes of hemiplegia should be excluded
- Patient may have history of headaches
- If patient perfectly normal with other disease and is young comes with hemiplegia then think of cerebral aneurysm or AV malformation

# *Severe Migraine*

- *Patient has history of unilateral throbbing headache*
- *h/o Aura & Precipitating factors*
- *Nausea /vomiting visual symptoms like flashes of light*
- *Hemiplegia is such cases develop due to severe spasm of cerebral artery leading to less blood supply to area of brain*

## *Vertebro-basilar insufficiency*

- Ask for stiffness and difficulty or pain during movement of neck
- Any neck problems because vertebral artery ascend through foramina cervical
- Vertebrae
- Any history of disturbances in balance, ataxia or in gait
- H/O of tinnitus ,vertigo , giddiness etc

# TIA

- *Hemiplegia improving within 24 hours can be due to*
- *TIA*
- *Hypoglycemia*
- *Hyperglycemia*
- *Hypertensive encephalopathy*
- *Ask for any electrolyte disturbances due to any cause*

# *Congenital Hemiplegia in Children*

- *Cerebral palsy (CP) is the name for a condition which impairs movement by impairing the ability of the brain to send the proper nerve signals to the muscles.*
- *CP has different forms; Spastic hemiplegia is a relatively common form of CP*

# *Congenital Hemiplegia in Children*

- *Spastic hemiplegia has many other several causes. A stroke of any type can cause spastic hemiplegia. Many people do not realize that children can suffer strokes*

# *Congenital Hemiplegia in Children*

- Other causes spastic hemiplegia include the following
- Head injuries and brain damage during delivery due to anoxia etc
- Sturge-Weber Syndrome, a congenital condition characterized by vascular problems and facial birth marks known as port wine stains

# *Congenital Hemiplegia in Children*

- Ask about events at delivery or any infections viral etc during pregnancy
- Any prolonged and difficult delivery

# *Todd's Paralysis*

- *Todd's Paralysis, which affects some epilepsy patients, is also known to occasionally cause temporary spastic hemiplegia*
- *Because of repeated epileptic fits the neurons ultimately get damaged due to anoxia etc and can result in hemiplegia*

## *Leukodystrophies/Multiple sclerosis*

- *Spastic hemiplegia are caused by hereditary diseases known as*
- *Leukodystrophies/Multiple sclerosis*
- *Ask about episodic attacks and visual problems in past at first attacks improve but after many years of repeated attacks they don't improve and result in permanent damage of nervous system*

# *Infections*

- *That cause meningitis or encephalitis*
- *Ask about what type of infections it is*
- *Find out in history is it viral, bacterial , Rickettsial , fungal or Protozoal infection*

Please read part two & three of this slide presentation for better understanding

Thank  
you

Prof Bashir

