

anterior surface of the shoulder joint⁽¹⁰⁾. Subacromial and sub-deltoid Bursitis, which causes pain at lateral aspect of shoulder. Adhesive capsulitis (frozen shoulder) is a common painful condition associated with loss of active movement in the direction of external rotation and abduction⁽¹⁰⁾. Other causes include glenohumeral subluxation⁽¹¹⁾ soft tissue trauma⁽¹²⁾ Brachial plexus traction neuropathy⁽¹³⁾ and central cortical post stroke mechanism may play a role⁽⁷⁾.

Patients and Methods

56 patients; aged from 29 – 73 years; suffered from stroke with hemiplegia during the first⁽⁶⁾ months post stroke were studied at Alkindi teaching hospital, between January 2004 – June 2005, all the patients had CT scan of the brain at the onset of the stroke; the patients was classified into ischemic or hemorrhagic stroke according to CT scan results; then neurologist took Full history in details and examined the patient neurologically to diagnose and localize his neurological deficit. Speech was assessed in all patients⁽¹⁴⁾ which includes 1- spontaneous speech assessment 2-comprehension 3-naming objects 4-repetition 5-reading 6- writing the patients with left sided weakness were examined for cortical sensory loss ; astereognosis was examined by asking ability to identify 2 centimeter cube object and 2 centimeter circumference ball we use this a little bit large sizes because of paralysis of the hand and poor hand grip⁽¹⁴⁾. graphesthesia was assessed by drawing the Arabic shape of number 9 and 2 on the patient palm using pencil. Sensory inattention assessed by ability to recognize simultaneous stimuli on both sides of the body the abnormal response is when the patient can recognize only the sound right side of the body at simultaneous

stimulation and normal response of both side when examined separately; the patients with aphasia did not involved in cortical sensory examination because of barrier of difficult communication. Muscle power grading was assessed according to medical research council scale (MRC) of great British which recorded the power in 6 grades⁽¹⁵⁾ the patients then referred to rheumatologist who examined the patient.

The patient had full blood count, blood sugar, ECG, Chest X-ray, Cervical X-ray Shoulder X-ray and electromyography /nerve conduction study were done by the examining neurologist; the rheumatologist at last diagnosed the cause of the shoulder pain. Patients with Ischemic heart disease, with diabetes mellitus and with any joint problems were excluded from the study. P value < 0.05 was considered significant and was used whenever applied.

Results

56 patients with stroke suffering from shoulder pain were studied; 29 patients had ischemic stroke and 27 had hemorrhagic stroke (intracerebral hemorrhage). 17 of those with ischemic stroke were female (58.6%) and 12 out of 29 were male (41.4%) (Table 1).

10 out of 27 patients with intracerebral hemorrhage were female (37%) and 17 were males (63%). (Table 1)

23 patients aged above 60 years; 18 patients aged between 51-60 years; 10 patients ages were between 41-50 years; 3 patients' ages were between 31-40 years and 1 patient was 29 years old age. (Table 2)

In patients with Ischemic stroke, no patients had shoulder pain in the first month after stroke, 17 out of the 29 developed the shoulder pain in the