Headache as the Sole Presenting Symptom of Acute Myocardial Infarction

Sir,

The International Classification of Headache Disorders does not include Acute Myocardial Infarction (AMI) or Acute Coronary Syndrome (ACS) as one of the rare causes of headache.¹ On review of the literature it has been observed that it is very rare for patients with AMI or ACS to present with headache as the sole symptom. We had a patient admitted to our hospital with headache as the only complaint for AMI.

A 48 years male, ht.163 cm, wt. 66 kg., old hypertensive continuing regularly atenolol 50 mg daily for 1 week reported to emergency department at 11.25 pm on 08/02/07 with intermittent severe headache of 2 hours duration. The headache was located in bitemporal regions, explosive in nature, not relieved by any measure but increased on exertion. There was no history of vomiting and fever. He was non-diabetic. He had bouts of headache during the past one month which was relieved by rest. He correlated his headache to a trivial blunt injury to the head about 2 years back. He also had an episode of apprehension 5 days back associated with perspiration. On admission, he was conscious, oriented, afebrile, pulse 68/min., regular, BP 150/100 mm of Hg. Systemic examination did not reveal any abnormality. On the provisional diagnosis of tension headache or migraine he was treated with clonazepam 0.5 mg, nimesulide 100 mg and atenolol 50 mg. Emergency investigations were done which showed Hb 15.0 g/dl, ESR 02 mm 1 hour, TLC 9,200/cumm, P 69, L 24, E 6, M 1, RBS 120 mg/dl, Urine albumin – trace, sugar-nil, occasional calcium oxalate crystals, ECG : Normal (Fig. 1a).

On the next day (09/02/07) his headache persisted and he was restless. BP 160/100 mm of Hg, pulse 80/min, regular, systemic examination did not reveal any abnormality. He was treated with tablet propranolol 10 mg 8 hourly, flunarizine 10 mg daily, aciclofenac 100 mg and paracetamol 500 mg. His PPBS 130 mg/dl, total cholesterol 208 mg/dl, triglyceride 122 mg/dl, HDL-c 42mg/dl, LDL-c 142 mg/dl, blood urea 23 mg/dl, creatinine 1.3 mg/dl, CPK-NAC 824 u/L (30-170 u/L), CPK-MB 54 u/L (0-24 u/L), LDH 442 u/L (upto 450 u/L), SGOT 39 u/L, Troponin – T was negative, SGPT 46 u/L, alk phos 58 u/L, Na 140 mm01/L, K 4.7 mm01/L. X-ray PNS – normal. On 10/02/07, he was still having headache and could not sleep. CT scan head was done and reported to be normal.

His condition remained same without improvement. Headache persisted, he had sweating and sleepless night. Since his CPK-MB was high on 09/02/07, ECG was repeated at 7.45 AM on 12/02/07 which showed ST elevation in V3 to V5 leads indicating acute anteroseptal infarct (Fig. 1b).

Cardiac enzymes were repeated to show CPK NAC 793 u/L, CPK MB 47 u/L, SGOT 97 u/L, LDH 1603 u/L and Troponin T positive. With the diagnosis of AMI, cardiologist was consulted and LMWH, aspirin, clopidogrel, atorvastatin, oxygen, IV fluids were administered. He was shifted to ICU where he was thrombolysed. ENT and neurophysician reference were done for headache. Coronary angiography was planned and done on 15/02/07 which detected total occlusion of left anterior descending, 95% stenosis of proximal part of left circumflex and 85% stenosis of proximal part of left obtuse marginal (Fig. 2).

Drug eluting stents after PTCA were implanted in circumflex and obtuse marginal. The patient stated that he got instant relief of the headache during PTCA. On 23/02/07, he was discharged from hospital with LMWH, ecosprin, clopidogrel and atenolol.

He was readmitted on 28/02/07 with recurrent headache for 2 days and cough since morning. He had also feeling breathless during coughing. Also complaining of apprehension since the morning. On examination, he was conscious, co-operative, well oriented. Afebrile, pulse 100/min, regular respiration 22/min, BP 110/70 mm of Hg. There was no pallor, cyanosis, oedema, icterus or clubbing. JVP normal. Systemic examination did not reveal any abnormality. Investigations : Troponin T - positive, ECG : Anterior wall infarction (old) (Fig. 1c), chest x-ray - mild
cardiomegaly, Angiography subacute stent thrombosis - PTCA to left circumflex and PTCA with drug eluting stent to left anterior descending artery were done. He was relieved of the headache and cough and discharged from hospital on 08/03/08 with advice to continue aspirin, clopidogrel, isosorbide mononitrate, diuretics, carvidelol and digoxin. He remained stable subsequently and on follow up showed significant improvement.

The patient presented with headache on the initial episode of AMI and also on the subsequent stent thrombosis. He did not complain of chest pain at any time. The literatures show that headache may be the only presenting feature in AMI or ACS but the definite mechanism is not explained. It is believed that this clinical symptom results from convergence cardiac autonomic nervous plexus with somatic inputs originating from head but not due to vascular spasm.\textsuperscript{2,3} Owing to the very rare occurrence of headache as a symptom of myocardial ischaemia, diagnosis is difficult and requires a high degree of suspicion. The idea of reporting this case is to create awareness of physicians towards headache as one of the rare presenting symptoms of AMI or ACS.

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