

## **Tension-type headache and disorder of pericranial muscle in Indonesian recent graduates of high school**

### **Abstract**

**Introduction.**—*Disorder of pericranial muscle plays significant role in the pathophysiology of tension-type headache in the majority of its sufferers. This study aims to assess muscle tenderness and pain sensitivity in tension-type headache sufferers in Indonesian recent graduates of high school.*

**Methods.**—*Thirty tension-type headache sufferers and 30 headache-free subjects were recruited consecutively from candidates for new students of University of Gunadarma, Depok in 2001. Pericranial tenderness was assessed by manual palpation and pressure pain threshold as the measure of pain sensitivity was recorded by pressure algometer. Eight pairs of pericranial muscles and tendon insertions were palpated for tenderness assessment, and bilateral sides of temporal and trapezius muscles were tested for pain sensitivity.*

**Results.**—*Tension-type headache sufferers were more tender than headache-free subjects at all locations to be examined; especially temporal and trapezius muscles ( $p < 0.01$ ). Compared with headache-free subjects, tension-type headache sufferers also exhibited considerably decreased pressure pain threshold ( $p < 0.01$ ) both at temporal and trapezius muscles. Tenderness measure, expressed as total tenderness score, was significantly related inversely to each of pressure pain thresholds in 4 locations to be examined ( $p < 0.01$ ). Nevertheless, being expressed in its site-specific values (local tenderness score), significant inverse relation between tenderness and pressure pain thresholds only existed at left and right temporal and left trapezius muscles ( $p < 0.05$ ).*

**Discussion.**—*Pericranial muscle tenderness increased in tension-type headache sufferers. Decreased pressure pain threshold in tension-type headache sufferers indicated increase in pain sensitivity. 'Muscular disorders' in tension-type headache could therefore be interpreted both as increased tenderness and increased pain sensitivity.*

**Keywords:** *IHS classification, Indonesian, pain threshold, tenderness, tension-type headache*

**Abbreviations:** *IHS International Headache Society, LTS local tenderness score, MCH muscle contraction headache, PPT pressure pain threshold, TH tension headache, TTH tension-type headache, TTS total tenderness score*

(Harlan J, Ronoatmodjo S, Markam S. Medika Tahun XXVIII No. 10: 634-638, 2002)