ABSTRACT

**Background:** The importance of iron deficiency as a public health problem is based ultimately on the seriousness of its consequences on health include in immune function. Recurrent aphthous stomatitis (RAS) can be one of iron deficiency indicator. Traffic police is a job with high risk iron deficiency caused by plumbum exposure. Plumbum is direct competitors with iron on receptor binding sites in the duodenum. Therefore, people who suffered lead poisoning will be accompanied by iron deficiency. **Purpose:** This study aims to determine the relationship between blood levels of iron and RAS in the traffic police at Polrestabes Surabaya. **Method:** This study was observational analytic with cross sectional approach. The samples used were 98 traffic policemen were taken by simple random sampling. Data were collected by conducting interviews, intra-oral examination, and laboratory tests. **Result:** There’re 16 police officers have iron deficiency, 31.3% affected by RAS **Conclusion:** Blood levels of iron associated with RAS. Other factors that affect blood level of iron such the frequency consumption of Fe and tannins, lead levels in the blood, and the position is also associated with RAS. Other predisposing factors affecting the RAS on traffic police at Polrestabes Surabaya is age and smoking rates.

**Key word** : blood iron, recurrent aphthous stomatitis, traffic police