Abstract

**Background:** Appendicitis is the most common cause of urgent surgery in the world and has a more prevalence in young (10 to 29 years old). Early diagnosis and treatment can prevent the complications. CRP as an acute phase reactant increases in appendicitis and its serum and probably salivary level may be helpful in early diagnosis. Based on this theory we decided to evaluate CRP level measurement in saliva as an accessible biologic liquid.

**Material and Methods:** A cross sectional study was carried out in 30 normal healthy individuals and 30 patients with acute appendicitis were hospitalized in Imam Reza hospital, Tehran, Iran. Hs-CRP levels were assayed before surgery in serum, stimulated and unstimulated whole saliva by ELISA method. Statistical analysis of the unpaired Student’s t-test and Pearson correlation

**Results:** Serum (P=0.001), unstimulated (P=0.0054) and stimulated (P=0.003) saliva CRP levels in patients were significantly higher than in control group. Saliva hs-CRP concentration correlated significantly with serum hs-CRP level (r = 0.675, P = 0.0001).

**Conclusion:** Salivary CRP level measurement as a simple, rapid, sensitive and non-invasive test seems to be useful in confirming acute appendicitis diagnosis.

**Keywords:** Appendicitis; hs-CRP; Saliva