

Early Dynamics of Leptin Plasma Level in Surgical Critically ill Patients. A Prospective Comparative Study

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Abstract

Background: Leptin (LPT), a hormone secreted by adipocytes, plays a role in inflammation and infection. Our study aimed to characterize the early dynamics of LPT in comparison with CRP and IL-6 during systemic inflammatory response syndrome (SIRS) and sepsis in surgical patients.

Methods: Sixty patients were assigned into 3 equal groups: SIRS (SI) group with major abdominal elective surgery; sepsis (SE) group with community-acquired complicated intra-abdominal infection and controls (C). LPT, CRP and IL-6 were measured initially in all groups and repeated in groups SI and SE within 5 days after surgery (9 samples – 4/day1, 2/day2, 1/next 3days).

Results: LPT increased at 12-24 hours in SI group, but stayed within normal range in SE group. CRP and IL-6 had higher values in SE group versus SI group with an early peak for IL-6 and a late peak for CRP.

Conclusions: LPT has a different early dynamics during SIRS and sepsis. LPT measurement in association with CRP or IL-6 may be useful in the differential diagnosis and prognosis of surgical critical illness at different time courses.

Key words: leptin, sepsis, inflammation, marker, IL-6

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