Correlation between hemoglobin levels with wound infections in orthopedic patients: a case-control study

Marzieh Kargar Jahromi(1), Saeed Sobhanian(2), Mohsen Hojat(3), Leila Taheri(4)

Abstract

Introduction: One of the most serious complications after orthopedic surgery is surgical site infection (SSI). The identification of preoperative serum markers that are independently associated with postoperative adverse outcomes could be the initial step in the eventual inclusion of these variables in risk prediction of SSI. The primary objective of this article was to determine correlation between hemoglobin levels and wound infections in orthopedic patients.

Method: We undertook a retrospective case-control study that, employing identified data at a hospitals of Jahrom University of medical sciences. Based on objective of this article the sample consisted of 74 orthopedic patients. The samples were divided into two groups: group A (infected (37) and group B, non-infected (37)). Data on laboratory measurement of Patients followed a protocol for collecting data through serial visits. In the laboratory evaluation, we analyzed the hemoglobin level by fresh vein blood by sismex set.

Result: There were significant difference of hemoglobin levels in 2 groups by T-test (df: 72, t: -2.152, p: .035). Moreover, repeated measurement by (Greenhouse-Geisser) model shown that decrease process of 4 time measurements in 2 groups is significant (OR=1.813).

Conclusion: We found that decreasing in Hb levels immediately after operation is associated with SSI. Thus, Hb stabilization and prevention of blood loss interoperation could be important modifiable intervention for reduction in SSI.

Keyword: wound infections, orthopedic patients, hemoglobin.