



The aim of this study was to investigate the association between medical waste handling and HBV infection by conducting a meta-analysis of available evidence” Arafa and Eshak (2019).

Abstract:

Background: Hepatitis B virus (HBV) infection is a significant occupational hazard in health care settings and represents a public health concern. The aim of this study was to investigate the association between medical waste handling and HBV infection by conducting a meta-analysis of available evidence.

Methods: Pooled odds ratios (ORs) and confidence intervals (CIs) of the included studies were calculated, using the random-effects model, for medical waste handlers versus non-medical waste handlers. Publication bias was detected using the regression test for funnel plot asymmetry, and quality assessment was conducted according to the Newcastle-Ottawa Scale.

Results: Nine cross-sectional studies, published between 1992 and 2018, were included. Medical waste handling was associated with higher odds of HBV infection compared to non-medical waste handling (pooled OR = 2.88; 95% CI, 1.40-5.93; I² = 61.36%; P value for heterogeneity = .008). Subgroup analysis showed higher odds of HBV infection in studies conducted in Africa (pooled OR = 3.61; 95% CI, 1.19-11.00). Most studies were of poor to fair quality; yet, little evidence of publication bias was detected (P value for publication

bias = .983). No single study showed a substantial impact on the pooled results.

Conclusions: The present meta-analysis supports the suggestion that medical waste handling is associated with HBV infection. This association was shown to be more obvious in African health care settings.

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Reference:

Arafa, A. and Eshak, E.S. (2019) Medical waste handling and hepatitis B virus infection: A meta-analysis. American Journal of Infection Control. September 11th. DOI: <https://doi.org/10.1016/j.ajic.2019.08.011>. .

