ABSTRACT:
OBJECTIVES: Globally, human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) is the leading cause of death in people aged 15-49 years and HIV causes significant mortality in adults and children. The estimation of the risks of mortality among HIV-positive adults who are not on antiretroviral treatment in a South Indian hospital was the main objective of the study.

METHODS: A facility-based retrospective cohort study was conducted with data on 135 patients who were registered but not on treatment from December 2011 to December 2013. Multiple logistic regression analysis was applied to identify the risk factors for mortality among HIV patients.

RESULTS: A total of 40 patients were dead during the follow-up period. Patients with age between 10-49 yrs (OR 3.88, 95% CI 2.27-6.65), baseline World Health Organization (WHO) stage IV (OR 4.93, 95% CI 2.28-10.69), WHO clinical stage IV (OR 7.24, 95% CI 1.81-29.84), and CD4 count <200 cells/µl (OR 0.52, 95% CI 0.20-1.29) were found to have a high risk for death. Another factor of increased risk of death although statistically not significant was absence of opportunistic infections. This may be due to low BMI, CD4 >200 cells/µl were all significant predictors of mortality compared to their counterparts. Patients with low BMI (OR 2.05, 95% CI 1.21-3.49), CD4 count >200 cells/µl (OR 3.88, 95% CI 2.27-6.65) were found to have more risk.

CONCLUSIONS: An estimated 1.8 million patients die of HIV worldwide every year in this era of ART. In India, we have estimated that 23.3 million people with HIV have an estimated HIV prevalence of 0.51%. In India 4916 HIV-related deaths were reported in 2011. The main cause of death among People Living With HIV (PLWH) in developing countries are endemic diseases like Tuberculosis, Malaria, Pneumococcal Pneumonia and opportunistic infections like Cryptococcal meningitis. Histoplasmosis and various protozoan diarrheas. There has been only few studies analysing the causes and risk factors of death among PLWH in hospital setting in India. In this scenario we are analysing the causes and risk factors leading to the death of PLWH in a case control study.

BACKGROUND: Human immunodeficiency virus (HIV) disease has emerged as one of the biggest challenges for public health along with Tuberculosis and Malaria in developing countries in the 21st century. The advent of combination antiretroviral therapy (cART) rolled out free of cost (through the 3 by 5 initiative of World Health organization (WHO) and the Presidents emergency plan for aids relief (PEPFAR)) has dramatically reduced the morbidity and mortality from HIV disease. But only 50% of medically eligible patients have been put on ART worldwide because of various socio economic demographic factors. An estimated 1.8 million patients die of HIV worldwide every year in this era of ART. In India, we have estimated that 23.3 million people with HIV have an estimated HIV prevalence of 0.51%. In India 4916 HIV-related deaths were reported in 2011. The main cause of death among People Living With HIV (PLWH) in developing countries are endemic diseases like Tuberculosis, Malaria, Pneumococcal Pneumonia and opportunistic infections like Cryptococcal meningitis. Histoplasmosis and various protozoan diarrheas. There has been only few studies analysing the causes and risk factors of death among PLWH in hospital setting in India. In this scenario we are analysing the causes and risk factors leading to the death of PLWH in a case control study.

DISCUSSION: Patient with low BMI had increased risk of death which has been also shown in previous studies. Low BMI which is usually due to malnutrition, secondary to chronic diarrhoea or opportunistic infections contributes to immunodeficiency which increases risk of death. It is known that CD4 Counts < 200 Cells/µl is a risk factor for death among People Living With AIDS (PLWHA). Pneumococcal infection due to increased incidence of AIDS defining illness. In this study we found that CD4 < 200 Cells/µl was having a risk for death. Another factor of increased risk of death although statistically not significant was absence of opportunistic infections. This may be due to opportunistic infections not been able to be diagnosed in patients CD4 >200 cells in resource poor settings like India. The commonest opportunistic infection among PLWH CD4 > 200 cel

CD4 COUNT

Opportunistic Infection

BMI

WHO Stage

CD4 COUNT

AGE

GENDER

BMI

WHO Stage

CONCLUSION: Introduction of new WHO recommended tests for diagnosis of Tuberculosis and other extra pulmonary TB like Fluorescent Microscopy, PNA, CB precious fluid test may improve the diagnosis of these diseases. We advise that CD4 Count as a predictor of mortality should be considered. 

LIMITATIONS: Sample size was small and under-limited. A robust clinical study with a wider sample size is required to validate this finding.

DISCLOSURE: Presenting author or Co-authors does not have any financial or material support from any pharmaceutical company.

REFERENCES: 


