

Hepatitis B and C in dialysis units in Almaty

Arina Yespotayeva¹, Kairat Kabulbayev², Almagul Kurmanova², Abduzhappar Gaipov², Assiya Kanatbayeva², Zhanar Mursalova²,

Al-Farabi Kazakh National University

Asfendiyarov Kazakh-National Medical University

Nazarbayev University, School of Medicine

LLP “Diaverum Kazakhstan”

Background

Patients getting maintenance haemodialysis (HD) are at higher risk for acquiring Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) infections than the general population. Strict infection control measures are essential to prevent nosocomial transmission. We aimed to investigate the incidence and prevalence of HBV and HCV infection in the HD population of Almaty dialysis units as well as risk factors for infection.

Methods

All adult patients getting maintenance HD (n=700) in Almaty dialysis centres (n=4) were studied between May 2016 and December 2019. Testing for Hepatitis B surface antigen (HBsAg) and anti-HCV antibodies was performed at initiation of dialysis and every 3–6 months thereafter. Serological markers for HBV and HCV were determined with immunoenzymatic assay (ELISA).

Results

Participant median age was 40 years and 58% were male. 110 patients (34.9%) were seropositive for HBV and/or HCV (anti-HCV positive 31.1%; HBsAg positive 2.6%; both positive 1.2%). Of the seropositive patients 4.7% were known to be infected before the initiation of HD. The prevalence of HBV±HCV infection varied widely between HD centres from 0% to 75.9%. Sero-positive patients were younger, had a long time on dialysis and more previous blood transfusions. Wide variation in rates of newly acquired infections was observed between dialysis centres. All new HBV cases were referred from centres already treating HBV infected patients. New HCV infections were reported in most centres but the rate of HCV seroconversion varied widely from 1.5% to 31%. Duration of dialysis, history of previous renal transplant and history of receiving HD in another centre in Almaty were significantly associated with seroconversion. Major risk factors identified by a standard questionnaire in 302 of 270 patients were the number of blood transfusions individuals had received and duration of dialysis, the latter including patients who received no blood transfusions

Conclusion

HBV and HCV prevalence in our HD patients is still high. These data emphasize the need for stricter adherence to infection control, barrier precaution and preventive behaviours with all patients. In summary, the prevalence of HBV and HCV in our HD patients is still high. These

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