

**P0061 Increased levels of secreted dipeptidyl peptidase-4 and carcinoembryonic antigen-related cell adhesion molecule 5 in Middle East Respiratory Syndrome (MERS)-Coronavirus patients**

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**Background:** Middle East respiratory syndrome-coronavirus (MERS-CoV) is a novel emerged virus which often cause severe lower respiratory infection leading to pneumonia, renal failure and death especially in patients with co-morbidity. Recent *in-vitro* studies demonstrated that the MERS-CoV utilizes the dipeptidyl peptidase-4 (DPP4) and carcinoembryonic antigen-related cell adhesion molecule 5 (CEACAM5) receptors for cell line infection and blocking these receptors with specific antibodies could prevent the infection.

**Materials/methods:** In this study we aimed to evaluate the the level of secreted DPP4 and CEACAM5 receptors in MERS-CoV patients (n=29), patients with co-morbidities including renal dialysis (n=32) and diabetes mellitus (n=22) and compare it with the levels of the healthy controls (n=51) using enzyme linked immunosorbent assay.

**Results:** We found that there was a significant increase in the level of DPP4 receptor in MERS-CoV patients (mean=106.35, P< 0.0002) compared with healthy controls (mean=67.20), diabetic patients (mean=68.03), and renal dialysis patients (mean=76.46). There was a significant increase in the level of CEACAM5 receptor in MERS-CoV patients (mean=378.38, P< 0.0005) compared with healthy controls (mean=228.14), diabetic patients (mean=153.68), renal dialysis patients (mean=249.11). There were no significant differences in the levels of DPP4 and CEACAM5 receptors between diabetes mellitus, renal dialysis, and the healthy controls.

**Conclusions:** The increased levels of secreted DPP4 and CEACAM5 receptors specifically in MERS-CoV patients highlights the importance of investigating the role of these receptors during the course of MERS-CoV infection.

