The Administration of Infection Diseases During the Pandemic COVID-19 and the Role of the Differential Diagnosis with Biomarkers VB10

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Abstract : INTRODUCTION: The differential diagnosis between acute viral and bacterial infections is an important cost-effectiveness parameter at the stage of the treatment process in order to achieve the maximum benefits in therapeutic intervention by combining the minimum cost to ensure the proper use of antibiotics.The discovery of sensitive and robust molecular diagnostic tests in response to the role of the host in infections has enhanced the accurate diagnosis and differentiation of infections. METHOD: The study used a sample of six independent blood samples (total=756) which are associated with human proteins-proteins, each of which at the transcription stage expresses a different response in the host network between viral and bacterial infections.The individual blood samples are subjected to a sequence of computer filters that identify a gene panel corresponding to an autonomous diagnostic score. The data set and the correspondence of the gene panel to the diagnostic patents a new Bangalore -Viral Bacterial (BL-VB). FINDING: We use a biomarker based on the blood of 10 genes(Panel-VB) that are an important prognostic value for the detection of viruses from bacterial infections with a weighted average AUROC of 0.97(95% CL:0.96-0.99) in eleven independent samples (sets n=898). We discovered a base with a patient score (VB 10) according to the table, which is a significant diagnostic value with a weighted average of AUROC 0.94(95% CL: 0.91-0.98) in 2996 patient samples from 56 public sets of data from 19 different countries. We also studied VB 10 in a new cohort of South India (BL-VB,n=56) and found 97% accuracy in confirmed cases of viral and bacterial infections. We found that VB 10 (a)accurately identifies the type of infection even in unspecified cases negative to the culture (b) shows its clinical condition recovery and (c) applies to all age groups, covering a wide range of acute bacterial and viral infectious, including non-specific pathogens. We applied our VB 10 rating to publicly available COVID 19 data and found that our rating diagnosed viral infection in patient samples. RESULTS: The results of the study showed the diagnostic power of the biomarker VB 10 as a diagnostic test for the accurate diagnosis of acute infections in recovery conditions. We look forward to helping you make clinical decisions about prescribing antibiotics and integrating them into your policies management of antibiotic stewardship efforts. CONCLUSIONS: Overall, we are developing a new property of the RNA-based biomarker and a new blood test to differentiate between viral and bacterial infections to assist a physician in designing the optimal treatment regimen to contribute to the proper use of antibiotics and reduce the burden on antimicrobial resistance, AMR.
Keywords : acute infections, antimicrobial resistance, biomarker, blood transcriptome, systems biology, classifier diagnostic score

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