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Review Article **Published Date:- 2023-05-25**

COVID-19 detection and classification: key AI challenges and recommendations for the way forward

Coronavirus disease (COVID-19) is a viral pneumonia that is found in China and has spread globally. Early diagnosis is important for effective and timely treatment. Thus, many ongoing studies attempt to solve key COVID-19 problems such as workload classification, detection, and differentiation from other pneumonia and healthy lungs using different imaging modalities. Researchers have identified some limitations in the deployment of deep learning methods to detect COVID-19, but there are still unmet challenges to be addressed. The use of binary classifiers or building classifiers based on only a few classes is some of the limitations that most of the existing research on the COVID-19 classification problem suffers from. Additionally, most prior studies have focused on model or ensemble models that depend on a flat single-feature imaging modality without using any clinical information or benefiting from the hierarchical structure of pneumonia, which leads to clinical challenges, and evaluated their systems using a small public dataset. Additionally, reliance on diagnostic processes based on CT as the main imaging modality, ignoring chest X-rays. Radiologists, computer scientists, and physicians all need to come to an understanding of these interdisciplinary issues. This article first highlights the challenges of deep learning deployment for COVID-19 detection using a literature review and document analysis. Second, it provides six key recommendations that could assist future researchers in this field in improving the diagnostic process for COVID-19. However, there is a need for a collective effort from all of them to consider the provided recommendations to effectively solve these issues.

Observational Study **Published Date:- 2023-05-12**

Role of Inflammatory Markers in Predicting Severity in COVID-19 Patients at Tertiary Care Hospital, Ujjain (M.P.)

Originating from China in 2019, the novel Coronavirus Disease 2019 (COVID-19) pandemic had badly affected most of the world causing immense morbidity and mortality. The disease in moderate to severe cases was characterized by intense inflammation leading to ARDS and hypercoagulable states leading to thrombo-embolism and mortality. Aim: This study aimed to explore the association of inflammatory biomarkers with COVID-19 disease severity in our hospital which became a dedicated COVID hospital during the pandemic.

Case Presentation **Published Date:- 2023-04-07**

The effect of respira inhalation on the oxygen saturation of a patient’s blood (SpO2): A Case Report

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Introduction: Infection and the accompanying inflammation of the upper and lower respiratory tract, influenza and COVID-19, are among the deadliest diseases in human life in the world. Due to the high emergence of bacterial resistance to antibiotics, we strive to find alternatives to contribute to the treatment by using a new formulation of a mixture of six essential oils in the form of a drop called Respira drops for a therapeutic approach to the upper or lower parts of the respiratory system infection, either by inhalation or sniffing, or by touching it with the body in the form of a skin patch on the head, neck, or chest. The present study suggested that natural essential oils may act as a prophylactic and therapeutic agent in respiratory tract hypoxia, inflammation, and bacterial and viral infection (influenza and COVID-19).
Case presentation: A 62-year-old Yemeni man was suffering from acute pneumonia and had used antibiotics his condition improved, but he was suffering from difficulty breathing and stayed on the use of oxygen at home for more than three months, and his SpO2 ranged between 75 to 85 and he also suffered from an abdominal hernia, and he went for a procedure Surgery, and when the SpO2 was measured at 86, the surgery was not completed as a result, so he used Respira drops by inhalation and by steam for twenty-four hours and the next day he went to the hospital and the SpO2 was measured 96 and the operation was performed and he continued using Respira for two weeks three times per day and his condition improved completely.
Conclusion: The present case study shows the excellent therapeutic response for Respira drops as inhalation and smiling three times per day increased SpO2 levels which reflect the anti-inflammatory, antimicrobial and anti-viral effects (influenza and COVID-19).