

ملاحظات:



**Three to six-months Follow-up Chest CT Findings after
COVID-19 Pneumonitis, incidence of complications
and correlation to different risk factors**

Thesis

*Submitted in Partial Fulfillment of the M.Sc.
Degree in **Radiodiagnosis***

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2022

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالَ

سَبِّحَانِكَ لَا تَعْلَمُ لَنَا
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْعَظِيمُ

صدق الله العظيم

سورة البقرة الآية: ٣٢

Acknowledgment

*First and foremost, I feel always indebted to **ALLAH**, the
Most Kind and Most Merciful.*

*I'd like to express my respectful thanks and
profound gratitude to **Prof. Dr. Sherine George
Moftah**, Professor of Radiology - Faculty of Medicine-
Ain Shams University for her keen guidance, kind
supervision, valuable advice and continuous
encouragement, which made possible the completion of
this work.*

*I am also delighted to express my deepest
gratitude and thanks to **Dr. Asmaa Magdy
Mohamed Salama**, Lecturer of Radiology, Faculty of
Medicine, Ain Shams University, for her kind care,
continuous supervision, valuable instructions, constant
help and great assistance throughout this work.*

*I would like to express my hearty thanks to all my
family for their support till this work was completed.*

*Last but not least my sincere thanks and
appreciation to all patients participated in this study.*

Omar Mostafa Ali Elsayed Hebisha

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List of Abbreviations

Abb.	Full term
AA	<i>Aortic arch</i>
AFOP	<i>Acute fibrinous and organizing pneumonia</i>
AP	<i>Anteroposterior</i>
CDC	<i>Centers for Disease Control and Prevention</i>
COVID-19	<i>Coronavirus disease 2019</i>
CT	<i>Computed Tomography</i>
DIC	<i>Disseminated intravascular coagulation</i>
ICU	<i>Intensive care unit</i>
LA	<i>Left atrium</i>
LLL	<i>Left lower lobe</i>
LUL	<i>Left upper lobe</i>
MDCT	<i>Multi-detector</i>
MPR	<i>Multi-planar reformat</i>
NGS	<i>Next generation sequencing</i>
PIC	<i>Pulmonary intravascular coagulopathy</i>
RUL	<i>Right upper lobe</i>
SARS CoV-2	<i>Severe acute respiratory syndrome corona virus-2</i>
T	<i>Thickness</i>

INTRODUCTION

Coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2, has become a global pandemic. As of November 19, 2020, World Health Organization stated that this disease has been found in more than 200 countries. Pathology studies have shown that COVID-19 causes injuries in multiple organs and tissues, with extensive pulmonary involvement similar to that found in other coronavirus infections (ie, severe acute respiratory syndrome coronavirus and Middle East respiratory syndrome coronavirus infection) (*Xu et al., 2020*).

Chest CT plays a crucial role in the diagnosis and follow-up of patients with COVID-19 pneumonitis. Numerous studies have documented radiographic changes in the acute course of COVID-19, which range from mild to severe cases (*Shi et al., 2020; Pan et al., 2020; Bandirali et al., 2020*). Recent publications *Han et al. (2020); Wang et al. (2020)* have found that approximately 94% of hospitalized patients have persistent lung parenchymal findings on their discharge CT scans. In addition they reported that lung opacities in 53 % of patients with mild COVID-19 resolved with no adverse sequelae within 3 weeks after discharge. Data from previous coronavirus infections (ie, severe acute respiratory syndrome and Middle East respiratory syndrome) suggest that there may be substantial fibrotic consequences (*Zhang et al., 2020; Antonio et al., 2020; Das et al., 2020*) in patients with COVID-19. However, little is known about the long-term lung changes after COVID-19 infection.

AIM OF THE WORK

To evaluate pulmonary changes on 3-6 months follow-up chest CT scans and to explore the risk factors for fibrotic-like changes in the lung in patients who recovered from COVID-19 pneumonia.