



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



HANAA ALY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

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The Role of Magnetic Resonance Imaging in Evaluation of Chemotherapy Induced Posterior Reversible Encephalopathy Syndrome in Cancer Patients

Thesis

Submitted for Partial Fulfillment of
MD Degree of **Radiodiagnosis**

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2021

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالَ

سُبْحَانَكَ لَا عِلْمَ لَنَا
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْعَظِيمُ

صدق الله العظيم

سورة البقرة الآية: ٣٢

Acknowledgments

*First and foremost, I feel always indebted to **Allah** the Most Beneficent and Merciful.*

*I wish to express my deepest thanks, gratitude and appreciation to **Prof. Dr. / Mohammed Abd El-Aziz Aly**, Professor of Radiodiagnosis, Faculty of Medicine, Ain Shams University, for his meticulous supervision, kind guidance, valuable instructions and generous help.*

*Special thanks are due to **Prof. Dr. / Yasser Ibrahim Abd El-Khalek**, Assistant Professor of Radiodiagnosis, Faculty of Medicine, Ain Shams University, for his sincere efforts, fruitful encouragement.*

*I am deeply thankful to **Dr. / Yosra Abd El-Zaher Abdullah**, Assistant Professor of Radiodiagnosis, Faculty of Medicine, Ain Shams University, for her great help, outstanding support, active participation and guidance.*

*Really I can hardly find the words to express my gratitude to **Dr. / Ayda Aly Youssef**, Assistant Professor of Radiodiagnosis, National Cancer Institute, Cairo University, for her supervision, continuous help, encouragement throughout this work.*

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

Sara Mahmoud Abd El-Hameed Anter

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List of Abbreviations

Abb.	Full term
ADC	<i>Apparent diffusion coefficient</i>
ADEM	<i>Acute disseminated encephalomyelitis</i>
ANOVA	<i>One Way Analysis of Variance</i>
CA	<i>Catheter angiography</i>
CSF	<i>Cerebrospinal fluid</i>
DW	<i>Diffusion weighted</i>
FOV	<i>Field of view</i>
ITH	<i>Intrathecal</i>
JC	<i>John Cunningham</i>
MAP	<i>Mean arterial blood pressure</i>
MRA	<i>MR angiography</i>
MRI	<i>Magnetic resonance imaging</i>
MRP	<i>MR perfusion</i>
NCI	<i>National Cancer Institute</i>
NEX	<i>Number of excitations</i>
PML	<i>Progressive multifocal leukoencephalopathy</i>
PRES	<i>Posterior reversible encephalopathy syndrome</i>
ROS	<i>Reactive oxygen species</i>
SPSS	<i>Statistical Package for Social Science</i>
SWI	<i>Susceptibility-Weighted Imaging</i>
T1W	<i>Axial T1 weighted</i>
T2*W	<i>Axial T2* weighted</i>
T2W	<i>Axial T2 weighted</i>
TE	<i>Echo time</i>
TR	<i>Repetition time</i>
VEGF	<i>Vascular endothelial growth factor</i>

INTRODUCTION

Posterior reversible encephalopathy syndrome (PRES) describes a usually reversible neurologic syndrome with a variety of presenting symptoms ranging from headache, altered mental status, seizures, and vision loss to loss of consciousness (*Bojan et al., 2011*).

The term describes a potentially reversible imaging appearance and symptomatology that is shared by a diverse array of causes including: hypertension, eclampsia and preeclampsia, immunosuppressive medications such as cyclosporine, various antineoplastic agents, thrombocytopenic syndromes, Henoch-Schönlein purpura, hemolytic uremic syndrome, Amyloid Angiopathy, systemic lupus erythematosus, and various causes of renal failure (*Khan et al., 2018*).

As PRES is being increasingly identified within the oncology population. Numerous medications linked to PRES can include traditional cytotoxic chemotherapeutics (e. g., cisplatin, cyclophosphamide, and high-dose corticosteroids), newer agents that target the vascular endothelial growth factor pathway (e. g., bevacizumab, sunitinib, and pazopanib), and supportive care mediations (e. g., granulocyte colony stimulating factors and erythropoietin) (*Crona and Whang, 2015*).