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بسم الله الرحمن الرحيم

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Surgical Management of Sphenoid Wing Meningiomas

A Thesis

Submitted in partial fulfillment of the requirements of the M.D. degree in Neurosurgery

By

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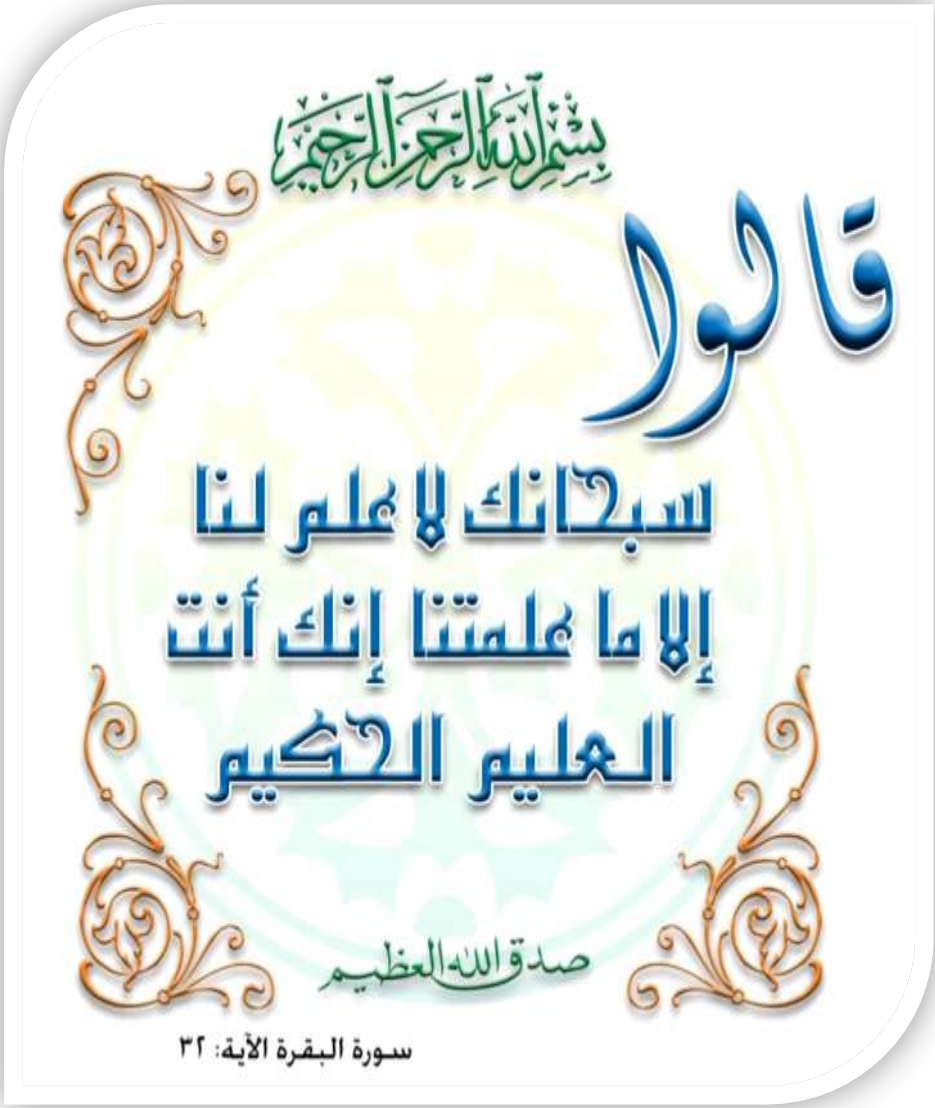
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Hamdy Thabet Hassan

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List of Abbreviations

Abbr.	Full-term
ACP	**:** Anterior clinoid process
BSMI	**:** Brain surface motion imaging
CS	**:** Cavernous sinus
CSF	**:** Cerebrospinal fluid
CT	**:** Computerized tomography
DWI	**:** Diffusion-weighted imaging
MCP	**:** Middle clinoid process
MRI	**:** Magnetic resonance imaging
MRS	**:** Magnetic resonance spectroscopy
NAA	**:** N-acetyl aspartate
PET	**:** Positron emission tomography
SD	**:** Standard deviation
SPSS	**:** Statistical package for social science
SWMs	**:** Sphenoid wing meningiomas
WHO	**:** World Health Organization

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Introduction

Sphenoid wing meningiomas (SWMs) constitute about 14% to 20% of intracranial meningiomas. Although they originate from arachnoid cells, they are usually attached to dural thickening or folding, where they receive their blood supply ***(Bassiouni et al., 2009).***

SWM refers to tumors that originate in any part of the bony crest formed by sphenoid wings (lesser and greater), which represents the boundary between the anterior and the middle cranial floor ***(Basso et al., 2000).***

In 1938, Cushing and Eisenhardt classified SWMs into two main varieties: en plaque and globoid. En-plaque meningiomas refer to tumors with a carpet-like dural growth, which are associated with a reactive hyperostosis that, in most cases, is marked and principally responsible for clinical manifestations ***(Bikmaz et al., 2007).***

Globoid meningiomas have traditionally been classified into three groups: (1) deep, inner, or clinoidal; (2) middle or alar; and (3) lateral, outer, or pterional. Middle or alar meningiomas have radiological` characteristics similar to lateral or pterional meningiomas. Surgical resection and clinical results of both types are almost identical. For this reason, some authors suggest that globoid meningiomas of the sphenoid wing