

.....

Vascular Injury and Transsphenoidal Surgery

Rod J. Oskouian^a, Daniel F. Kelly^b, Edward R. Laws, Jr.^a

^aDepartment of Neurological Surgery, Health Sciences Center, University of Virginia, Charlottesville, Va., and ^bDivision of Neurosurgery, University of California School of Medicine, Los Angeles, Calif., USA

Abstract

Vascular complications can and do arise from transsphenoidal surgery and, when they occur, they have a high incidence of mortality and serious morbidity. The anatomic substrate for such complications is discussed, along with technical aspects of surgery and other methods for the avoidance of vascular complications.

Copyright © 2006 S. Karger AG, Basel

Introduction

The history of pituitary surgery is interesting in that the transsphenoidal approach to the sella turcica originated due to its safety. At the turn of the century when neurosurgeons first began to approach the pituitary area, a craniotomy was extraordinary difficult and had unacceptable mortality rates compared to the standards of today. The instruments, lighting, cautery, anesthesia, medications and the operating microscope, things that we take for granted today, were nonexistent, and therefore the transsphenoidal approach was significantly less dangerous for the patient than a craniotomy. The reemergence of transsphenoidal surgery began with Norman Dott who learned the technique from Harvey Cushing who then taught it to Guiot [1]. Guiot introduced the use of the radiofluoroscopy to visualize the sella and sphenoid sinus and then used this information to direct his trajectory, depth, and position of the instruments [1, 2]. Jules Hardy of Montreal learned the technique from Guiot and continued to refine and improve the procedure with the introduction of the operating microscope, and specialized instruments [2].