Contributions of Muslim Scientists to Medicine and Related Sciences

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IIUM Press
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
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CHAPTER TWENTY THREE

ABU AL-QASIM AL-ZAHRAWI’S CONTRIBUTION TO

NEUROSURGERY

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23.1 INTRODUCTION

This chapter investigates Al-Zahrawi’s contribution to surgery especially neurosurgery. The main objective of this chapter is to study Al-Zahrawi’s views on neurosurgery operation. Neurosurgery is concerned on causes of brain diseases, spine, peripheral nerves, and arteries of the neck. Abu Al-Qasim Al-Zahrawi was born in 936 C.E. in city Zahra of Cordoba. He was regarded as the father of modern surgery and his Kitab al-Tasrif (Book of Confessions) which consists of 30 volumes was translated into various European languages and used in medical schools.

23.2 HYDROCEPHALUS

Hydrocephalus means water and head which is normally known as the condition “water on the brain”. The treatment of hydrocephalic children, surgical evacuation of superficial intracranial fluid was found by Al-Zahrawi. He also mentioned that sometimes the fluid collected between the skin and the bone, and sometimes between the bone and meningeal coverings. In clinical practice, the infants with hydrocephalus have abnormally large heads because of the presence of high pressure of the fluid in the individual skull bones. In his book, Al-Zahrawi described the surgery instrument used in the treatment of “infantile hydrocephalus” (M. Turgut, 2009, pp. 1043-1044; N. R. F. Al-Rodhan, 1986, pp. 92-95). The patient was treated with a transverse incision made in the middle of the head. A deep incision made to release fluid between the meninges and bone. Then a tight dressing using cotton was applied to prevent reaccumulation of the fluid (N. R. F. Al-Rodhan, 1986, pp. 92-95; L. Bakay, 1982, pp.284-285). Thus, sometimes the patients would have died of hemorrhagic complications secondary to superior sagittal sinus rupture (A. Aciduman, 2007, pp. 513-516; L. Bakay, 1982, pp.284-285). The instrument used is shown in Figure 1.