



Technical Aspects of Microsurgical Dissection of Sylvian Fissure

Sajjad Muhammad* and Mika Niemela

Department of Neurosurgery, University of Helsinki, Helsinki University Hospital, Finland

Clinical Video

Multiple intracranial pathologies including aneurysms of middle cerebral artery, distal basilar artery and suprasellar pathologies require sylvian fissure opening. Safety of venous, arterial and neural structure is the key to successful surgery through sylvian fissure corridor. Here we describe and demonstrate technical aspects and use of microsurgical instruments to safely dissect sylvian fissure.

Demonstration of surgical video of an experienced vascular surgeon and senior author (MN) and describe technical aspects during safe dissection of sylvian fissure.

Hypoplastic sylvian fissure with few superficial veins is rare. In most of cases superficial veins are well developed and have multiple anatomical variations of superficial veins. The course and anatomical knowledge of superficial sylvian veins is important to decide the entry point. In case of presence of frontobasal bridging vein encourage to start from temporal side, while presence of double or triple stem of superficial sylvian vein encourage to start between the veins. Flexible technique molding the adjustment of entry point and direction of dissection according to intraoperative situation warrants safe splitting of the fissure. Moreover, proper use of microinstruments including micro scissors, bipolar and suction irrigation is the key factor. Independent of anatomy and course of sylvian fissure, surgeon dissects the arachnoid under high magnification (at least 10 times) with the tips of bipolar splitting the arachnoid and making space between the natural spaces. Micro scissors are used intermittent to cut thicker arachnoid membranes. Suction is used constantly as a retractor to hold the brain to facilitate dissection with tip of thin bipolar (Video 1) https://youtu.be/_kGZd0UOxIk. Water jet (water dissection) is used to clean the trabecular tissue and facilitate the direction of dissection. Dissection of sylvian fissure initially into the depth at a shorter part of sylvian fissure and then opening the fissure inside out makes easier to open the fissure widely. Another technical aspect during the surgery is to follow the natural spaces around the major arteries.

Above mentioned technical aspects including use of high magnification microscope, use of natural spaces around the arteries, use of water dissection proper use of suction irrigation and bipolar tips provides safe splitting the sylvian fissure.

OPEN ACCESS

*Correspondence:

Sajjad Muhammad, Department of Neurosurgery, University of Helsinki, Helsinki University Hospital, Helsinki, Finland, Tel: 00358-503757488; E-mail: ext-sajjad.muhammad@hus.fi

Received Date: 30 Dec 2018

Accepted Date: 24 Jan 2019

Published Date: 28 Jan 2019

Citation:

Muhammad S, Niemela M. Technical Aspects of Microsurgical Dissection of Sylvian Fissure. *Ann Clin Case Rep.* 2019; 4: 1583.

ISSN: 2474-1655

Copyright © 2019 Sajjad Muhammad.

This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.