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Endoscopic Anatomy of the Third Ventricle

Microsurgical and Endoscopic Approaches

In collaboration with

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Preface

Endoscopical surgery of the third ventricle has been applied for many years by transcerebral routes, especially as ventriculo-cisternostomies by opening the floor of the third ventricle. These surgeries were carried out either free-hand, or using stereotaxy or – later on – neuronavigation. Spaceoccupying vascular and other lesions, such as tumors or cysts located in the third ventricle, were usually eliminated by microsurgical approaches. These approaches were carried out mainly by approaches along the extracerebral midline structures or close to them. Midline approaches, especially approaches along the falx crossing the Corpus callosum, are less invasive than transcerebral approaches. Extracerebral midline approaches are variable in extent and direction of the approach, transcerebral approaches are less variable. A further aspect is the sagittal extension of the third ventricle in the midline so that it can be reached easily by midline surgical approaches. A combination of microsurgery (for the extraventricular part of surgery) and endoscopy (for the intraventricular part of surgery) has been performed in the recent years. However, the appliance of this combined technique is not common for the following reasons:

- Rare indications for surgery of midline structures
- Technical aspects
Using flexible endoscopes it is possible to inspect all segments of the third ventricle. But surgical manipulations are only possible in a straight direction. Flexible endoscopes are not available in all neurosurgical departments at this point of time.
- Anatomical aspects
- Anatomical details are well known for the microsurgical approaches. However, numerous common variants of the anatomy of the extraventricular routes are still unknown.

In this book anatomical aspects important for combinations of microsurgical and endoscopical approaches are presented and illustrated. Numerous common anatomical variants are demonstrated with reference to their impact for the surgical technique. Combinations of both surgical techniques are called “surgical” in this book, except for procedures, which are exclusively microsurgical or endoscopical procedures. These techniques are called “microsurgical”, or “endoscopical”, respectively.

The authors successor in Freiburg, Professor Dr. J. Zentner, made available rooms and materials for the anatomical dissections and demonstrations, as he has been doing for more than 7 years of his chairmanship in Freiburg. His vice-chairman Privatdozent Dr. S. Rosahl, has demonstrated endoscopical and microsurgical operations during cadaver head dissection.

The author found a good translator in Dr. A. Weyerbrock, who edited the manuscript and helped to improve numerous neurosurgical aspects of presentation of this book.

I am grateful to Mrs. E. Rotermund, Professor Zentner’s secretary for typing and preparing the final edition of the manuscript.

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Wolfgang Seeger

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