

Clinical Fellowship in Neurosurgical Anesthesia

During your time in the Department of Anesthesia at the University of Western Ontario, you will participate and become familiar with the following:

CLINICAL SERVICES:

[1] Cerebral Aneurysm Surgery and Arteriovenous Malformations: We are an international referral centre for the management of these patients and you will have ample opportunity to become familiar with their management.

[2] Surgery for Intractable Epilepsy: While we have been doing this type of surgery for more than two decades, it is only recently that neurologists and neurosurgeons worldwide have come to realize the therapeutic potential of such surgery and this has resulted in epilepsy surgery becoming one of the fastest growth areas in neurosurgery. We are one of Canada's three major national referral centres and you will have plenty of opportunity to work with these patients. The majority of these patients are done awake but sedated so that their speech and motor areas of the brain can be mapped prior to surgical excision. This will allow you to learn some functional neuroanatomy and to become experienced in managing patients undergoing rather harrowing surgery during neurolept analgesia.

[3] Stereotactic Surgery: This is used for diagnostic biopsies, management of chronic pain and movement disorders, and the management of intractable epilepsy. Each of these requires different anesthetic approaches.

[4] Endovascular Treatment (interventional neuroradiology): Increasingly cerebral aneurysms and AVMs are being treated in the Radiology Department either as the only treatment or as a prelude to surgery. We are actively involved in providing anesthesia services to these patients. In addition, we provide anesthesia for diagnostic imaging, predominately magnetic resonance imaging (MRI). We have two units, a 1.5 Tesla and a 0.5 Tesla Unit and a 4.0 Tesla functional MRI facility. You will thus have the opportunity, not only of administering anesthesia in hostile environments, in view of the radiation and magnetic fields, but would also have the opportunity of learning about the therapeutic, diagnostic and research potential for anesthesia in the Radiology Department.

[5] In addition to the above special areas, you will be exposed to a wide variety of more usual neurosurgery including craniotomies for tumours and hemifascial spasm carotid endarterectomy, spinal surgery, etc. We will also ensure that you maintain your skills in the management of anesthesia in general and in the management of the difficult airway.

MONITORING/DIAGNOSTIC SKILLS:

While you are here, you will have the opportunity of learning to use Transcranial Doppler, Evoked Potentials and EEG monitoring during surgery.

NON-ANESTHESIA EXPERIENCE:

(1) You will be offered the opportunity of spending a brief period on the Epilepsy Service so that you have a better understanding of the total management of patients with epilepsy and this will also afford you an opportunity to learn (much) more about the reading, use and potential of the electroencephalogram.

(2) You will be offered a similar brief period in Neuroradiology Department so that you can learn more about the indications and uses of diagnostic and interventional neuroradiology and so that you will also become much more facile with the interpretation of CT scans, MRIs, etc.

RESEARCH/ACADEMIC ACTIVITIES:

It is our expectation that each fellow will complete at least one research project taking it from conception through to completion. In addition, each fellow is expected to write at least one review article/book chapter. Further participation in research and writing activities is always welcomed and encouraged.

Under supervision you will also review manuscripts submitted to a variety of anesthesia journals, abstracts submitted to anesthesia scientific meetings and grant applications. These activities together with the research activities outlined above should give you an excellent insiders view of the entire research process.

If you are returning to a teaching position, I would also encourage you to take either the 2-day or the 5-day course in Teaching At The University Level offered by our University. If teaching is to be a major component of your career, there is also a 30-week teaching course for medical educators that you could take.

EVALUATION PROCEDURE:

The Fellow will be evaluated on an ongoing basis based on their clinical management skills. Reports will be solicited from all staff members actively working with the Fellow. In addition, a formal written evaluation will be undertaken after each six-month period in the Fellowship. The results of this evaluation will be discussed in person with the Fellow and appropriate actions taken to ensure educational objectives are met.