

Outline

The definition of the Department of Neurosurgery in Japan is “A general department covering all of the nervous system and bone, muscle, and vessels adjacent to the nervous system for prevention, diagnosis, treatment and rehabilitation”. The Department of Neurosurgery is one of the basic fields of the new medical specialist system decided on by the Ministry of Health, Labour and Welfare in 2013. Accordingly, neurosurgeons treat neuro-emergency diseases including head trauma and stroke, common neurological diseases associated with numbness, pain, and paralysis, and neurological disease necessitating specialized surgeries.

Based on the medical policy of the Red Cross Society, the Department of Neurosurgery in Kyoto Red Cross Hospital Daini serves all patients who are dying and suffering, and also assists medical groups who serve patients at the periphery modern medicine.

Experienced staffs treat patients using the newest high-quality equipment. In neurovascular disease, all members have trained both in open and endovascular surgery. For the treatment of unruptured aneurysms, specific MRI, intraoperative blood flow measurement (ICG), intraoperative endoscopy, stent-assisted coil embolization, and biplane angiography have been used. Ninety-seven percent of unruptured aneurysm patients are discharged to their own home, and no patients died or became bed-ridden from 2006 to 2012. Arterio-venous malformations are removed after embolization or radiated with a gamma-knife. For main trunkal cerebral vessel stenoses, carotid endarterectomy or carotid stent (CAS) procedures are performed. For the prevention of embolic complications, the reverse flow method has been used in the carotid stenting procedure. For brain tumors, open surgery, radiation, and chemotherapy are performed. For spinal disease, less invasive laminoplasty and percutaneous vertebroplasty are conducted. In functional neurosurgery, microvascular decompression for trigeminal neuralgia and stimulation of the brain for intractable pain are carried out. The ‘Pain Clinic’ has been set up. In pediatric neurosurgery, moyamoya disease, spina-bifida, trauma, and pediatric tumors are treated. Pediatric moyamoya disease has been treated with the safer ‘multiple EDAS method’.

The Department of Neurosurgery in Kyoto Red Cross Hospital Daini is assisting regional hospitals in Kyoto Prefecture as well as ‘Wakkanai Teishinkai Hospital’, the most northern hospital in Japan, and the educational course of the World Federation of the Neurosurgical Society.

Surgical cases

	2014	2013	2012	2011	2010	2009
total	322	313	367	384	315	321
trauma (including CSH)	84	77	87	95	92	77
spontaneous ICH	26	14	20	35	30	35
cerebral aneurysm	61	66	84	79	58	64
AVM	8	6	8	5	10	8
trunkal stenosis	36	49	60	48	24	26
brain tumor	43	39	34	35	31	38
spine, function	3	10	15	17	11	6
pediatric	1	0	2	2	3	1