Přínos Full HD techniky pro zvýraznění morfologického obrazu ve výuce neurochirurgie

The contribution of full HD devices to setting off the morphological view in neurosurgery training

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To improve the illustrative feature of the pregradual training in neurosurgery intended for medical students at the Department of Neurosurgery, Medical Faculty, Masaryk University, St. Anne's University Hospital Brno, a decision was made to purchase the new Aesculap (B. Braun) FULL HD, 3CCD PV 440 Camera endoscopic imaging chain. At the same time, we subsequently purchased two modules of the Polycom HDX 8006 – Full HD conferencing system and a 58“ Full HD Panasonic TH 58PF11EK plasma display which is placed in the teleconferencing room. This whole chain is being used for illustrative education. The principal indication of neuroendoscopy in neurosurgery is the surgery of brain ventricles and cranial compartments difficult to reach by means of a microsurgical technique. The FULL HD imaging quality enables detailed depiction of the cerebral ventricular system and its surroundings, and, moreover, it reduces the occurrence of errors. Apart from its usage in teaching neurosurgery, the system facilitates greatly the surgery of congenital central nervous system anomalies as well as the surgery of certain brain tumours. Inasmuch as the HD and SD outputs are available, the system is compatible with our existing SD imaging system. Currently, the problem of FULL HD endoscopic image archiving by means of our dedicated ProLiant ML370R04 mini PACS server is being solved together with the possibility of transmitting such image, at full quality, by means of teleconference devices.