

can be used to build up composite images derived by the fusion of 3D intraoperative scenarios with neuroimaging-derived 3D models.

**Conclusions.** Our experience, in the Neurosurgical Department, has shown that this is an affordable technology with great opportunities. The models can be used for a variety of purposes (teaching, planning, 3d printing). The creation of individual 3D models for preparation for surgery is already actively used in several areas of neurosurgery.

**Key words:** segmentation, neurosurgery, 3d printing, reconstruction, planning

#### **74. CRANIAL NEURONAVIGATION IN NEUROSURGERY: USEFULNESS IN RELATION TO TYPE AND SITE OF PATHOLOGY**

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**Introduction.** Neuronavigation is an example of today's technological development applied to medicine that makes it more reliable, transforming surgical interventions into safer and less invasive procedures. Increasingly important is that the use of intraoperative image guidance like MRI, CT facilitates determining the location and the extent of the intraparenchymal lesions.

**Aim of the study.** The review of various aspects of neuronavigation, including a short history of the synergy between navigation and neurosurgery, as well as technical aspects applied in neurosurgery and clinical benefits in relation to type and site of pathology.

**Materials and methods..** The review of literature and neurosurgical case examples of different type and site of pathology..

**Results.** Studies have shown that the use of neuronavigation improves the extent of resection, which in turn correlates with improved patient outcome and ensures a better preservation of function.

**Conclusions.** Neuronavigation improves intraoperative topographical orientation in neurosurgery. It is a helpful tool to define approaches, craniotomy flaps, borders of tumor resection or guidance of the endoscope in cases where visible anatomic landmarks are missing. Neuronavigation helps to prevent further neurological deficits making safer, less invasive, and more cost-efficient procedures.

**Key words:** neurosurgery, neuronavigation, contemporary methods

#### **DEPARTMENT OF UROLOGY AND SURGICAL NEPHROLOGY**

#### **75. METHODS OF DIAGNOSTIC AND CONTEMPORARY TREATMENT OF RENAL SOLITARY CYST. CLINIC EXPERIENCE**

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**Introduction.** Renal Solitary cyst is one of the most common kidney pathologies and occurs in 50% of necropsy in people over 50 years of age. Most commonly, cystic formations develop in the kidney, usually asymptomatic. The etiology of renal cysts can be congenital, sporadic or acquired, and their development can occur at any level of nephron or collector tubes. Simple kidney cyst is specific to adult age, is not genetically transmitted, and is not accompanied by another chromosomal abnormality. In children, the incidence is reduced by 0.1-0.45%, but it increases in adult to 20% at 40 years and 33% to 60 years.

**Aim of the study.** Analysis of the results obtained in the clinic following the treatment applied to patients with solitary renal cysts, treated by the classical surgical method and laparoscopic.

**Materials and methods..** The retrospective study was performed in the Department of urology and surgical nephrology of the State University of Medicine and Pharmacy *Nicolae Testemitanu*, within the Republican Clinical Hospital *Timofei Moşneaga*, on a batch of 92 patients diagnosed with solitary renal cyst, treated by different methods (laparoscopic resection, open cystectomy and cyst puncture) during the years 2017-2019.

**Results.** From the total number of patients according to cyst localization: in 50 (54.3%) of patients the cyst was located on the left side and in 42 (45.7%) of patients on the right side. The distribution by sex was as follows: 48 (52,2%) men and 44 (47,8%) women diagnosed with solitary renal cyst. Anatomical location of the cysts: upper pole 48 patients (51%), lower pole 30 patients (32.6%), mediorenal 14 patients (16.4%). The size of the operated cysts ranged from 3 cm to 10 cm and more. The age of the patients in the study group with solitary renal cyst ranged from 25 years to 78 years, the average being ~ 53 years. According to the Bosniak classification, we observe the prevalence of the classical surgical method in Bosniak cysts III. Laparoscopic method was performed in patients with Bosniak cysts I and II, cyst puncture was performed only in patients with Bosniak cysts I. Of the 92 patients diagnosed with solitary renal cyst in 57 (62%) of them, the laparoscopic treatment method was performed, open cystectomy 23 (25%) patients, and cyst puncture to 12 (13%) patients.

**Conclusions.** Following this study we distinguish the advantages of the minimally invasive laparoscopic method which is of choice at the present moment, by the minimal aggressiveness of the surgical act, the absence of large postoperative scars, the decrease of the hospitalization period -3-4 days compared to -10-14 days after the open surgical method, minimum number of recurrences, rapid rehabilitation and reintegration into the social life and professional activity of patients.

**Key words:** renal cyst, laparoscopy, cystectomy, Bosniak classification.

## 76. THE EFFECT OF WATER INTAKE IN PATIENTS WITH URETEROLITHIAS

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**Introduction.** It is a standardized approach to treat non- obstructive calculi of ureter by hydrotherapy. In theory, the administration of intravenous fluid bolus stimulate renal fluid flow in patients with ureterolithiasis in time of acute renal colic. Historically hydrotherapy has been adopted in practice as a part of a conservative treatment in the emergency department. Patients are hospitalized for three to four days and every day they are given intravenously four to five litres of fluid along with diuretics in the hope that the stone will be removed. In this research are considered scientific publications about the effect of water intake in patients with ureterolithiasis.

**Aim of the study.** To determine the efficiency of water intake in patients with ureterolithiasis.