

**Aim.** The aim of this study was to establish the role of magnetic resonance imaging (MRI) in patients with Mayer-Rokitansky-Kuster-Hauser syndrome (MRKHS).

**Material and methods.** The study included 28 patients with MRKHS who underwent a pelvic MRI for determination of the spectrum of genital and associated malformations. Each malformation of the organs was classified in accordance with the VCUAM (Vagina Cervix Uterus Adnex-associated Malformation) classification (Oppelt P. et al., 2005).

**Results and discussion.** Müllerian remnants: In 27 (96.4%) showed uterine rudiments (U4a or U4b) and only in one (3.6%) — complete uterine agenesis ( $p < 0.0001$ ). Bilateral uterine buds (U4a) were more often than unilateral (U4b), respectively 23 (85.2%) vs. 4 (14.8%). In most cases, the predominant uterine rudiments without cavitation — 25 (92.6%) vs. 2 (7.4%) — the existence of the endometrium ( $p < 0.0001$ ). In classic variant of MRKHS, bilateral buds were connected with fibrous band-like structures ( $n=25$ , 92.6%), located mid-line or paramedian — 19 (76%) vs. 6 (24%) ( $p=0.0005$ ). Ovaries: All cases had bilateral ovaries (A0), normal structure or micropolycystic — 23 (82.1%) vs. 5 (17.9%) ( $p < 0.0001$ ). In most cases, ovaries located in the pelvic cavity — 24 (85.7%) and only 4 (14.3%) were ectopic (extrapelvic) ( $p < 0.0001$ ). Vagina: The upper 2/3 of the was absent in all cases, whereas the lower 1/3 was present in two variants: ultra-short segment ( $< 1$  cm) and short segment ( $> 1$  cm) — 9 (32.1%) vs. 19 (67.9%) ( $p=0.0154$ ). Associated findings: Associated malformations were found in 5 (17.9%) cases, renal anomalies — unilateral agenesis ( $n=5$ , MR) and association with vertebral ( $n=2$ , MS). MRKHS type I vs. type II (MURCS) —  $p < 0.0001$ . Correlation of MRI and surgery demonstrated perfect agreement (Cohen's kappa index 1.0).

**Conclusion.** MRI is a useful and noninvasive imaging method in the diagnosis and evaluation of patients with MRKHS.

#### CLINICAL AND RADIOLOGICAL DIFFERENCES BETWEEN TUBERCULOUS AND PYOGENIC SPONDYLITIS

*Sharmazanova O.P., Deresh N.V.*

<sup>1</sup>Kharkiv Medical Academy of Postgraduate Education, Kharkiv, Ukraine

<sup>2</sup>Diagnostic center «Omega», Kyiv, Ukraine

**Aim.** The purpose of our study was to highlight the clinical and radiological differences between tuberculous and pyogenic spondylitis.

**Materials and methods.** Retrospectively reviewed medical histories, CT and MRI of 20 patients with spondylitis, 13 with pyogenic spondylitis, 7 with tuberculous spondylitis. Diagnoses were based on bacteriological and cultural research and was made clinically, because of positive therapy dynamics after antibiotic therapy. Pyogenic spondylitis was caused by *Staphylococcus aureus* and *Pseudomonas pyocyanea* (in 50% was associated with diabetes), tuberculous spondylitis — by *Mycobacterium tuberculosis*. CT was performed on a 16-slice scanner, MR — on 0.2 T and 1.0 T system using a spine array coil, in 3 cases with intravenous contrast. The following criteria: the ratio of clinical manifestations and severity of the revealed destructions of the vertebrae, the number of affected vertebrae, the ratio destruction of the vertebral body and disk, sequestrs,

prevalence of distributional type, affection of the facet joints, paravertebral abscesses (wall and content), enhancement, kyphotic deformation.

**Results.** Tuberculous spondylitis was characterized by a torpid clinical start and severe destruction of the vertebrae;  $\geq 2$  vertebrae were affected; destruction of vertebral body predominated over the disk destruction; sequestrs were large and spongy; interdisk and subligamentous types of spread; rare affection of facet joints; paravertebral abscess was without capsule, tight, with calcination; frequently developed kyphotic deformities. Pyogenic spondylitis was characterized by acute violent clinics at the background of minor vertebral destructions, 1-2 vertebrae were affected; destruction of disk prevailed over the vertebral destruction; sequestrs were small and cortical; interdisk and epidural types of spread; frequent affection of the facet joints; paravertebral abscess had thick/thin and smooth wall, liquid high-protein content, gas; enhancement of pyogenic capsule; rarely developed kyphotic deformities.

**Conclusions.** Tuberculous and pyogenic spondylitis have clinical and radiological differences, which can be observed on CT, MRI. This may influence the choice of treatment.

#### FORENSIC EVALUATION OF BONE TRAUMA: IMAGING MODALITIES FOR DIFFERENT TYPES OF INJURIES

*Tertisnii L.*

*Department of Radiology and Medical Imaging, Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova*

**Introduction.** Radiographic imaging is widely used for forensic evaluation of traumatic injuries. Recent advances in medical imaging modalities, however, may pose additional challenges related to the imaging modalities of choice in different types of trauma.

**Aim.** The purpose of the current study was to assess the value of radiographic imaging for forensic evaluation and adjustment of image projections to the types of traumatic bone injuries.

**Materials and methods.** The study included 1002 consecutive patients older than 18 years old, with traumatic injuries that were referred for forensic evaluation at the Department of Radiology of the State University of Medicine and Pharmacy „Nicolae Testemitanu” in Chisinau, Moldova. A total of 1404 imaging investigations were performed for evaluation of reported head traumas ( $n=496$ ), chest injuries ( $n=416$ ), upper and lower extremity injuries ( $n=336$ ), suspected vertebral injuries ( $n=84$ ) and pelvic injuries ( $n=72$ ). Special projections were used depending on the type of trauma and its location for optimal visualization of potential bone injuries with a lowest radiation dose. Technical parameters were adjusted according a specially designed algorithm for different types of traumatic injuries. The results were correlated with the final diagnosis and required repeated imaging investigations for different types of injuries.

**Results.** Overall, radiographic investigation was helpful in confirming or ruling out bone injuries in 90.9% of traumas to upper and lower extremities and in 93.1% of injuries involving pelvic bones. Re-examination was required in 8.3% patients with extremity trauma, 59.7% patients with chest injuries, 68.3% of patients with