

maximum achievable purchase of the screws. Wide posterior approaches to the lumbar spine, exposing lateral to the facet joints and onto transverse processes causes an additional degree of muscular damage and blood loss not present with a simple laminectomy. A cortical bone trajectory (CBT) of the pediclescrew has been proposed as an alternative to prevent screw pullout and decrease the morbidity associated with the wide posterior approach to the spine. The CBT screw follows a lateral path in the transverse plane and caudocephalad path in the sagittal plane. This technique has been advocated because it is reportedly less invasive, improves screw–bone purchase and reduces neurovascular injury.

**Materials and methods:** Between January 2016 and March 2016, seven patients (2 men and 5 women) underwent transforaminal lumbar interbody fusion (TLIF) using the cortical bone trajectory instead of traditional pediclescrew fixation for degenerative spondylolisthesis of the lumbar spine. The cortical screws were placed with the assistance of the BrainLab Curve navigation system and the Siemens Artis Zee multi-purpose system.

**Results:** The average patient age was 63,5 years (range 55 – 72 years). Prior to surgery, all patients underwent MRI, CT and DEXA scans. Low vertebral bone mineral density (osteoporosis and osteopenia) was found in three cases. The L3 to S1 levels were instrumented. For the L3 and L4 pedicles, we used 5,5x35 mm polyaxial screws, for L5 - 6,5x35 mm screws. For S1 we used a different trajectory of the screw, oriented to engage with the high-density bone by penetrating the S1 superior endplate. This insertion technique allowed a larger 7,5 x 40 mm screw to be used, thus increasing the stability of the instrumentation construct. We obtained good postoperative results in all seven cases. Considerable improvement in both back and leg pain was achieved. In terms of complications, one case of pedicle fracture at the insertion site on the facetectomy side occurred. No dural tear, superior facet violation or screw misplacement were encountered. The mean operation time, radiation exposure and blood loss was significantly less than in the traditional lumbar fusion surgery.

**Conclusion:** We present early clinical results of a new technique that appeared to have a better fixation profile in laboratory testing. The CBT represents a good alternative option to obtain fixation for the lumbar spine, even in case of low bone quality.

**Keywords:** cortical bone trajectory, pedicle screw, degenerative, spondylolisthesis

## 177. COMPLICATIONS AND THEIR PREVENTION AFTER EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY (ES WL)

**Andrei Bradu**

Scientific adviser: Emil Ceban, MD, PhD, Professor, Department of Urology and Surgical Nephrology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction:** Approximately 80-90% of reno-ureteral stones have for treatment indication Extra Corporeal Shock Wave Lithotripsy (ESWL). Like a therapeutic procedure, extracorporeal lithotripsy may be accompanied by complications. Most of these are minor complications, but in a lower percentage, major complications can appear.

**Materials and methods:** The study was made in the Urology and Nephrology Department of the Republican Clinical Hospital, during January 2015 and November 2015, on a group of 120 (65 male and 55 female, mean age 41,3 years) patients diagnosed with reno-ureteral lithiasis and treated with ESWL. The dimension of the calculi has varied between 0,6 and 15 mm. Were analyzed the complications after ESWL.

**Results:** Hematoma is the most serious complication of extracorporeal lithotripsy, with a low incidence (0,83%). Acute pyelonephritis (3,33%) occurs either due to a pre-existing urinary infection, or by the release of germs located into the calculi during fragmentation. Flanc pain (98,3%) was the most common symptom was on the side were was made de ESWL. The pain disappear after 2-3 days with non-steroidal anti-inflammatory drugs. „Steinstrasse” (5.83%) was another complication and was resolved by administration of conservative treatment.

**Conclusions:** ESWL is a safe method to treat stones when proper indications are followed. But when we have the complication after ESWL we must as soon as possible to find this complications and to treat as well.

**Keywords:** urolithiasis, ESWL, treatment

## 178. THE TREATMENT OF SUPERFICIAL BLADDER TUMORS WITH BCG

**Alexandru Braniste, Mariana Braniste, Mihai Stanca, Ioan Serban Fanfare**

Scientific adviser: Daniel Porav-Hodade, MD, PhD, Senior Lecturer, Urology Clinic of Targu Mures County Hospital, Romania

**Introduction:** Bladder cancer is the 5th most common type of neoplasm regarding to incidence. Smoking is the primary risk factor in developing bladder cancer. Previous studies have shown that approximately 70% of the bladder tumors are nonmuscle invasive bladder cancer (NMIBC). Mycobacterium bovis bacillus Calmette-Guerin (BCG) is currently the standard conservative treatment of NMIBC.

**Material and methods:** We performed a retrospective study, conducted during 6 years from 2010 to 2016 at the Urology Clinic of Tg-Mures County Hospital with a total of 78 patients diagnosed with NMIBC. We analyzed the following variables: age, gender, histopathological result, the number of BCG infiltration, in the first six weeks one every week, at three and six months, cystoscopy and the rate of relapse, the main criteria of evaluating the results of the treatment.

**Results:** In the study that we conducted we had a number of 15 women (19,2%) and 63 men (80,8%). At the end of the first six weeks 89,7% of the patients completed all six infiltrations, 70,5% at 3 months and only 60,3% at 6 months. The results of cystoscopy were normal at 70,5%, 25, 6% did not have a cystoscopy performed. Patients were called for investigations first at three months, six months in the first year after finishing the therapy and then every year. In 63,8% of the patients who had the 6 month therapy, no relapse tumor was found in favor of 14,9% with relapse tumor.

**Conclusion:** The treatment with BGC infiltration is a conservative treatment with a high success rate.