

## 54. A COMPARATIVE STUDY OF VESICoureTERAL REFLUX IN INFANTS AND CHILDREN UNDER 5 YEARS OF AGE BETWEEN R. OF MOLDOVA AND ROMANIA

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**Introduction:** Vesicoureteral reflux is the most common urologic anomaly and is normally diagnosed after a urinary tract infection. VUR can be primary, due to congenital anomalous development of the ureterovesical junction or secondary due to a urinary tract malfunction, often caused by an infection. Secondary VUR is more frequently diagnosed in girls, while primary vesicoureteral reflux is more common in boys and it is often more severe than the pattern seen in females.

**Material and methods:** We performed a retrospective comparative analytic-observational study on 72 infants and children under 5 years of age, analysing the incidence of VUR in a hospital from R.of Moldova and one from Romania over a period of 3 years (2013-2015). 35 patients were diagnosed with VUR at Pediatric Clinic II Targu Mures, Romania and 37 patients at Uronefrology department at IMSP SCMC “V.Ignatenco” of Chisinau.

**Results:** The results showed that half of the children with vesicoureteral reflux belong to the age group of 1-3 years, girls are the most affected - 86.5% in Moldova and 54.3% in Romania (p=0.003). VUR is diagnosed in about 50% of the patients after repeated urinary infections but 33% after the first urinary infection. The diagnosis established by the age of 1 year - 61.1% (p=0.001) shows the congenital character of VUR. Unilateral damage is more common at a lesser degree of reflux, but with increasing VUR bilateral damage prevail - 66.7% in VUR grade 4 in Moldova (p=0.02) and 55.6% in Romania. The risk of developing reflux nephropathy is 9 times higher in children with severe VUR - 27% compared to children with low-grade VUR.

**Conclusions:** The first episode of UTI with positive urine culture in children up to 1 year and repeated urinary infections raise suspicion of reflux. Most of the affected children are girls who have a higher incidence in the development of UTI and this is supported by the statistically significant correlation found with our study (p value). This is explained by the physiological anatomy that favor infection of the urethra on a retrograde way. Early diagnosis and prompt treatment of VUR and UTI can prevent renal parenchyma infection, renal scarring and reflux nephropathy.

**Keywords:** vesicoureteral reflux, VUR, UTI, reflux nephropathy, renal scarring.