3. Summary

Contrast-induced nephropathy (CIN) is a term applied to acute renal failure associated with intravascular administration of iodinated contrast agent (ICA). Preexisting nephropathy is considered to be the main risk factor for development of CIN. Pathogenesis and prevention of CIN in nondialyzed patients with impaired renal function is frequently discussed in literature. There is almost no literature on impact of intravascular ICA on residual diuresis of already hemodialyzed patients. Preservation of residual diuresis in these patients keeps much better quality of life, reduces need for dietary and fluid restrictions and decreases cardiovascular mortality.

The aim of the study was to evaluate impact of the intravascular iodinated ICA on residual diuresis in hemodialysed patients.

Two groups of hemodialyzed patients with clinically significant residual diuresis (minimally 500 ml of urine per day) were studied. The patients from the first group were given isoosmolal contrast agent iodixanol (Visipaque, GE Healthcare, United Kingdom) in concentration of iodine 320 mg/ml with osmolality 290 mOsm/kg of water during endovascular procedure. The second control group was followed without ICA administered. Residual diuresis and calculated creatinine clearance had been evaluated in the both groups following 6 months.

The evaluated group included 42 patients who were given 99.3 ml of iodixanol in average (range from 60 to 180 ml). The control group included 45 patients. There was no statistically significant difference found between both groups in daily volume of urine ($p = 0.855$) and clearance of creatinine ($p = 0.573$).

We can conclude that residual diuresis is not significantly influenced by intravascular administration isoosmolar ICA (iodixanol) in range of volume from 60 to 180 ml in comparison to natural decrease of residual renal functions. This result can help the nehrologists and interventional radiologists to decide which imaging method/contrast medium to employ in hemodialysed patients in current practice.