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S4: VESICoureTERAL REFLUX

Moderators: Andy Kirsch (USA), Pedro-Jose Lopez (Chili)

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DO THE TYPE OF BULKING AGENTS AND INJECTION METHOD HAVE ANY INFLUENCE ON THE INCIDENCE OF URETERAL OBSTRUCTION BY ENDOSCOPIC TREATMENT OF REFLUX?

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PURPOSE

To research the effect of the type of bulking agents and injection method on the frequency of ureteral obstruction (UO).

MATERIAL AND METHODS

During 1998-2014, endoscopic treatment in 3782 patients (4898 ureter) was performed in 9 clinics in Russia and Belarus. I group - 2134 ureters, polyacrylamide copolymer was used, II group in 1424 ureters collagen was used, III group - 762 ureters, polyacrylate polyalcohol copolymer was used and group IV -578 ureters, dextranomer / hyaluronic acid was used. The method STING was used in 3984 ureters (81.3%) and HIT in 914 ureters (18.7%). The patients were followed up by ultrasonography the next day after injection, in a month and every 3 months during the year. For statistical analysis binary logistic regression was used.

RESULTS

High probability of formation of UO was statistically more significant ($p = 0.0001$) in patients of groups III (14) and IV (8) in comparison with children of groups I (9) and II (2). Not statistically significant differences were found in the frequency of UO in comparison with patients of groups III and IV ($p = 0.5$). UO was reported in 18 (0.45%) patients after the injection performed by STING, which was significantly less ($p < 0.0001$), than when we used the HIT method- 15 (1.6%).

CONCLUSIONS

The risk of ureteral obstruction using polyacrylate polyalcohol copolymer and dextranomer/hyaluronic acid was higher than using collagen and polyacrylamide copolymer. The use of HIT increases the risk of obstruction.

TREATMENT OF URETERAL OBSTRUCTION AFTER ENDOSCOPIC INJECTION IN VESICoureTERAL REFLUX

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PURPOSE

We retrospectively reviewed cases of ureteral obstruction in patients with vesicoureteral reflux who had undergone endoscopic injections with different bulking agents in Russian and Belarusian centers.

MATERIAL AND METHODS

In total 3782 (4898 ureters) patients with a mean age of 49.5 ± 36.4 months and male to female ratio of 1:2.2 were included in the study. Four different injection materials were used; polyacrylamide gel in 2134, collagen in 1424, dextranomer/hyaluronic acid in 578 and polyacrylate polyalcohol copolymer in 762 ureters. The patients were followed-up by ultrasonography the next day, in a month and every 3 months during the year and voiding cystourethrography in 3 months.

RESULTS

A total 33 (0.7%) cases of ureteral obstructions were detected. Acute obstruction was developed in 12 patients within 24 hours after injection. Manifestations of acute obstruction included pain and obstructive anuria in one patient with solitary kidney. Late obstruction (more than 6 months after injection) was identified in 21 ureters. Following treatments were used: stent insertion in 24 ureters, antibiotic prophylaxis in 2, percutaneous nephrostomy with subsequent reimplantation in 2 and reimplantation in 3 cases. One patient underwent endoscopic bulge incision. In stenting group hydronephrosis was relieved in 5 from 6 ureters with acute obstruction, but none with late obstruction. A perfect outcome was discovered in one ureter with antibiotic prophylaxis and after endoscopic bulge incision. Twenty ureters with failure of stenting and antibiotic prophylaxis were reimplanted.

CONCLUSIONS

The ureteral obstruction after endoscopic treatment is rare. Ureteral stenting is unsuccessful in cases of late obstruction.