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Postoperative evaluation of hydronephrosis due to the way of pyeloplasy (dismembered / non-dismembered)

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In recent years, we have seen rapid development of minimally invasive procedures in urologic oncology, but also in corrective surgery of congenital defects, including ureteropelvic junction obstruction (UPJO). After a period of testing the endoscopic treatment of UPJO, currently the majority of patients undergo laparoscopic or robotic surgery. Recently, single port laparoscopy (LESS) has become an optional technique in the urological armamentarium. Laparoscopic treatment of UPJO in adults has been established as the "gold standard" means of curing this quite common disease. Nowadays it draws much attention as it is one of the very few urological laparoscopic operations that can be done relatively easily by a laparoscopist with limited experience, and as such, resembles the case of cholecystectomy for general surgeons [1, 2].

Abundant literature offers much data about very good postoperative functional results of laparascopy: equal to open surgery and with the known advantage of minimal invasiveness. In contrast, many authors continue to commission research of functional supervision of patients after UPJO repair, since the disappearance of hydronephrosis observed in the ultrasound over a longer period of time may also result from the deterioration of renal function. However, it is surprising that the authors very seldomly give precise details about how long after the procedure the final outcome was evaluated and which diagnostic tools should be used.

In the current issue of CEJU, Isoyama and co-operators present a very interesting paper inspired by data coming from paediatric surgeons that the hydronephrosis after UPJO repair may subside very gradually, probably as the elastic properties of the renal pelvis may differ individually. According to the authors, this has two practical consequences. Firstly, provided that there are no remaining symptoms , the judgement of the result of surgery should be postponed, as there is still time for improvement, even as long as two years after the operation. Secondly, serial ultrasound may be a valuable alternative to more invasive diagnostic tests, such as intravenous pyelography (IVP) or diuretic renogram, during the follow-up. It is worth noting that, in our opinion, the evaluation of the hydronephrosis stage changes should be sought for each patient individually, as a step in the laparoscopic partial resection of the enlarged renal pelvis. In some cases immediately after surgery, with radical removal of the excess renal pelvis, the hydronephrosis is no longer observed [3]. The ultrasound evaluation of the functional effect of the surgery, by reducing the hydronephrosis, seems to be useful in the case of non-dismembered pyeloplasy, since the treatment is limited only to the longitudinal cut of UPJO and transverse suture without resection of the stenosed part of the renal pelvis [4]. The study is small as it is based on the analysis of only 16 patients, but may give urologists some scientific support for consultation of patients after UPJO surgery, who do not have symptoms, but are uncertain about the outcome, especially if there is some persistent hydronephrosis. From the Isoyama paper, we may conclude that the resolution of hydronephrosis may take even two years and may be followed very well by measurements from subsequent ultrasound evaluations, which are better that USG tests done separately. It can spare the patient unnecessary tests or maybe sometimes even prevent an unnecessary re-do operation. Moreover, subsequent ultrasound measurements of the size of the renal pelvis in the improvement of kidney function, after dismembered pyeloplasty of UPJO, in our opinion, provide an interesting noninvasive diagnostic option, but should be carried out individually, taking into account the extent of renal pelvis resection during surgery for each patient. If there are still any doubt as to the effect of the treatment, diuretic renogram and IVP remain the standard diagnostic procedures.

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