

PERIOPERATIVE OUTCOMES OF ROBOTIC VERSUS OPEN SIMPLE ENUCLATION FOR THE TREATMENT OF T1a-T1b RENAL CELL CARCINOMA. A SINGLE CENTER MATCHED-PAIR COMPARISON.

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Scopo del lavoro

The Simple Enucleation (SE), is a technique of nephron sparing surgery who excises the tumor surrounded by no visible rim of healthy parenchyma, developing by blunt dissection the natural plane between tumor pseudocapsule and healthy parenchyma. No previous study evaluated surgical, pathological, and short-term functional perioperative outcomes of robotic approach to SE. Aim of this study is to compare surgical results, morbidity and pathological data, including positive surgical margin (PSM) rate, of endoscopic robotic-assisted simple enucleation (ERASE) with those of open simple enucleation (OSE).

Materiali e metodi

We undertook matched-pair analysis (age, tumor size and nephrometry) of 392 patients treated with OSE or ERASE for T1a-T1b renal tumors in our department, including 160 patients in OSE group and 80 in ERASE. Surgical, pathological, short-term functional data and complications of ERASE and OSE were compared with univariate analysis. Perioperative variables independently associated with warm ischemia time (WIT)>25 min, complications, and postoperative acute kidney dysfunction (AKD) were assessed with multivariate analysis, separately.

Risultati

The matched groups were comparable in age, tumor size, nephrometry BMI, comorbidity index, and preoperative renal function. No significant difference resulted in ERASE vs. OSE group regarding WIT (18.5 vs. 16.4 min, p=0.5), intraoperative complications, postoperative complications, transfusion rate, reoperation rate for Clavien grades≤3 complication, and PSM rate (2.9% vs. 2.1%, p=0.63). In patients with elective indication to nephron sparing surgery, no significant difference resulted in variation of estimated glomerular filtration rate from baseline (8.5 vs. 13.9 ml/min, p=0.17) and in the incidence of acute renal failure. In ERASE comparing with OSE group, the clamping of renal pedicle was used with a significantly lower frequency (60% vs. 93.8% of patients; P25 min, nor with postoperative acute renal failure.

Discussione

The robotic approach to simple enucleation is feasible, and not inferior to open regarding surgical, pathological, short-term functional outcomes and morbidity. The loss of tactile sensation did not increase the technical difficulty of procedure, nor the positive surgical margin rate, in our analysis.

Conclusioni

the ERASE showed comparable perioperative outcomes to OSE, with the added benefits of lower recourse to pedicle clamping, a one day shorter hospitalization, along with the clear advantages of mini-invasivity.

CLAMPESS LAPAROSCOPIC SINGLE-SITE PARTIAL NEPHRECTOMY FOR RENAL CANCER WITH LOW PADUA SCORE: TECHNIQUE AND SURGICAL OUTCOMES.

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Scopo del lavoro

To describe the technique and report the surgical outcomes of clamless laparoscopic single-site (LESS) partial nephrectomy (PN) in the treatment of renal cell carcinoma (RCC) with low PADUA score, by reducing the blood pressure and increasing the intra-abdominal pressure of the pneumoperitoneum to 20 mmHg, timed to precisely coincide with excision of the tumor.

Materiali e metodi

Clamless LESS PN was performed in 14 patients with cT1a renal tumours. Indications to perform a clamless LESS PN were low-risk, laterally based renal tumours, located away from the renal hilum, with a PADUA score ≤7. Demographic data and peri-operative and postoperative variables were recorded and analysed. Kidney function was evaluated by measuring serum creatinine concentration and estimated glomerular filtration rate (eGFR) pre- and postoperatively and at 6-month follow-up.

Risultati

The median operating time was 120 min and warm ischaemia time was zero in all cases. Only one early complication (Clavien grade 1) was recorded: one patient developed a flank haematoma which it was possible to treat by conservative therapy. Serum creatinine and modification of diet renal disease eGFR were not found to be significantly different pre- and postoperatively and at 6-month follow-up. Definitive pathological results showed 12 pT1a RCCs and two pT1a-chromophobe RCCs. All tumours were removed with negative surgical margins. All patients were satisfied with the cosmetic results. At a median (range) follow-up period of 12 (8-15) months, all patients were alive without evidence of tumour recurrence or port-site metastasis.

Discussione

Clamless LESS PN remains a demanding surgical procedure, requiring much previous experience with conventional laparoscopy. Its combination of bent and conventional instruments reduces instrument collision and reproduces, albeit in a limited way, their triangulation as occurs in conventional laparoscopy.

Conclusioni

Clamless LESS PN is a safe and feasible surgical procedure in the treatment of low-risk T1a RCC, with excellent cosmetic results.