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PREDICTIVE FACTORS OF RESECTION TECHNIQUES DURING PARTIAL NEPHRECTOMY IN A COHORT OF "ENUCLEATIVE" CENTERS: INSIGHTS FROM THE SURFACE-INTERMEDIATE-BASE (SIB) MARGIN SCORE INTERNATIONAL CONSORTIUM

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Scopo del lavoro

Detailed reporting of resection strategies (RS) and resection techniques (RT) for tumor excision during partial nephrectomy (PN) is lacking in the current literature. The Scopo del lavoro is to evaluate 1) possible correlations between patient's and/or tumor's characteristics and RT performed and 2) whether the type of RT does influence perioperative outcomes after PN, harnessing the newly proposed Surface-Intermediate-Base (SIB) Margin score as a standardized reporting system.

Materiali e metodi

After institutional review board approval, data were prospectively collected from a cohort of 507 patients undergoing NSS at 16 high-volume Centers across the U.S. and Europe over a 6 months enrollment period. RT was classified according to the SIB score. RS was classified as "enucleative", "enucleoresective" or "resective" according to the most prevalent RT performed in each centre's cohort. Descriptive and comparative analyses were performed in the nine enucleative RS centres (EC).

Risultati

Overall, 507 patients were finally enrolled in the study. The RT was classified as pure or hybrid enucleation (E, SIB 0-2), pure or hybrid enucleoresection (ER, SIB 3-4), and resection (R, SIB 5) in 266 (52.5%), 150 (29.6%) and 91 (17.9%) patients, respectively in the overall cohort, while in 207 (74.7%), 56 (20.2%) and 14 (5.1%) patients in the EC cohort. Demographic data, comorbidity scores, surgical indication and approach did not significantly differ between the E, ER and R groups in the EC. Median PADUA score was 8 (IQR 7-9), 9 (7-10) and 9 (8-10) ($p=0.03$), and a PADUA score ≥ 10 was recorded in 19.3%, 37.5% and 28.6% ($p=0.02$) in the E, ER and R group, respectively. A clampless strategy was used in 79/204 (38.7%), 6/55 (10.9%) and 5/14 (35.7%) patients in the E, ER and R group ($p<0.05$). Surgical postoperative complications were recorded in 6.8%, 12.5% and 14.2% of patients ($p>0.05$). Positive surgical margins rate was 2.4%, 7.1% and 0% of patients, respectively ($p>0.05$). Trifecta outcome was achieved in 74.8%, 65.0% and 80.0% of patients for the E, ER and R groups ($p>0.05$).

Discussione

This is the first study evaluating preoperative predictive factors of RTs performed during PN and whether the type of RT significantly impacts on NSS outcomes using a standardized instrument of reporting.

Conclusioni

Overall, in EC, E represents nearly 75% of all procedures and it is associated with a significantly higher rate of clampless procedures compared to ER. However, ER and R are preferred in highly complex cases. As about surgical outcomes, E was associated with lower rate of postoperative surgical complication compared to ER and R and lower positive margin rate and higher Trifecta achievement compared to ER although these differences were not statistically significant.