

# **STUTRELESS LAPAROSCOPIC PARTIAL NEPHRECTOMY BY USING FIBRIN GEL (TSSUCOL®) IS ABLE TO REDUCE THE ISCHEMIA TIME WITH RENAL FUNCTION PRESERVING**

D. Tiscione, T. Cai, L. Luciani, V. Vattovani, G. Malossini (*Trento*)

## **Aim of the study**

Minimizing renal ischemia time is one of the most technically challenging step in laparoscopic partial nephrectomy (LPN). The aim of the present study was to evaluate the efficacy of sutureless LPN by using a fibrin gel (TSSUCOL®) in order to minimize renal ischemia time and preserve the kidney function, when compared with LPN standard suturing.

## **Materials and methods**

Between October 2008 and July 2009, 19 patients (mean age 58.3±7.1) underwent sutureless LPN by using of TSSUCOL® and compared with a series of 21 patients (mean age 57.9±7.5) who had undergone LPN standard suturing in the same period, considering the control group. All procedures were performed by the same surgeon. The following parameters were recorded: patient demographics, Charlson Comorbidity Index, tumour characteristics by using RENAL score, warm ischemia and operative time, estimated blood loss, mean hospital stay, post-operative complications by using Clavien-Dindo classification, renal function parameters, pathologic and follow-up data. The main outcome measure was the renal ischemia time and the kidney function preservation.

## **Results**

Median warm ischemia time was 13 minutes (range 11-19) in the TSSUCOL® group, while 19 (range 17-29) in the control group, with a statistically significant difference (p

## **Discussion**

LPN is increasingly performed all over the world and actually represents a valid procedure for the management of small renal tumours, but some technical aspects are still to improve. Here, we demonstrated that sutureless LPN with TSSUCOL® is able to reduce the warm ischemia, total operative time and preserve kidney function, without severe complications, when compared with standard suturing LPN. In particular, renal suturing during LPN is a difficult step, that increases operative time and warm ischemia time.

## **Conclusions**

Sutureless LPN with TSSUCOL® is a safe method and is able to reduce the warm ischemia, total operative time and preserve kidney function, without severe complications, when compared with standard suturing LPN.

# **TRI MATCH COMPARISON OF THE EFFICACY OF FLOSEAL® VS TACHOSIL® VS NO HEMOSTATIC AGENTS FOR PARTIAL NEPHRECTOMY: RESULTS FROM A LARGE MULTICENTER DATASET (RECORD PROJECT)**

A. Antonelli, A. Minervini, A. Mari, G. Bianchi, C. Fiori, A. Lapini, N. Longo, G. Martorana, V. Mirone, G. Morgia, F. Porpiglia, B. Rocco, R. Schiavina, S. Semi, M. Sodano, C. Terrone, A. Voipe, F. Zattoni, V. Ficarra, C. Simeone, M. Carini (*Brescia*)

## **Aim of the study**

The aim of this study is to investigate the efficacy of hemostatic agents (HA) in Nephron Sparing Surgery (NSS). A three-matched comparison between patients treated with no HA, with Tachosil® and with Floseal® was performed.

## **Materials and methods**

Observational multicentre study (RECORD Project) collects the data of 1055 patients who underwent PN between January 2009 and December 2012 at 19 Italian centres. Cases treated with more than one HA or with HA other than Floseal® or Tachosil® were excluded. A tri-match propensity score analysis was applied to create 3 groups - no HA group, Floseal® group, Tachosil® group - balanced for gender, age, surgical indication (elective/relative vs imperative), clinical stage (cT1a vs cT1b), tumour growth pattern, surgical approach (open vs minimally invasive), surgical technique (standard PN vs simple enucleation), preoperative haemoglobin and preoperative creatinine. The three groups were compared regarding the main intra and post-operative outcomes.

## **Results**

The study excluded 255 patients treated with more than one HA and were submitted 131 cases to no HA group, 200 to Tachosil® group, 489 to Floseal® group. In the original cohort significant differences among groups in terms of patient, tumor and surgical features were detected, so that a tri-match analysis for 66 triplets well balanced triplets were performed. The three matched cohorts presented a significant difference in EBL, lower in the Floseal® group, but this result lost significance if clinical important EBL was considered (>400 cc). No significant difference was found between three groups regarding medical and surgical post-operative overall complications, surgical haemorrhagic Clavien 2 and 3 complications, variation of haemoglobin and creatinine values between preoperative and 3rd post-operative day.

## **Discussion**

In order to reduce hemorrhage during NSS the use of biological HA is increasing, but literature on this subject is limited to some cases series, few retrospective studies and one randomized trial. Among the three groups, no differences were detected in the rates of medical and surgical complications, transfusion and re-intervention due to bleeding, as in variations between pre and postoperative levels of hemoglobin and glomerular filtration rate, overall and pairwise. Therefore, from these results, it seems that HA cannot exert any significantly protective effect against bleeding with respect to standard suturing. A possible explanation is that HA is often used improperly or indiscriminately. This statement is indirectly confirmed by the fact that, in spite of their frequent use, a reduction in the rate of bleeding was not observed in recent with respect to past series of PN.

## **Conclusions**

No differences in terms of overall and bleeding complications were detected among patients submitted to NSS without using HA, using Floseal® or Tachosil®. There is no clear evidence that the use of HA, in addition to sutures, can improve haemostasis after PN.