significant impact on calcium oxalate saturation, as limiting dairy products alone will decrease the alkali load leading to lower pH and citrate levels. They also emphasize that calcium restriction should be part of a broad dietary intervention that also limits oxalate intake so as to avoid a compensatory increase in urinary oxalate due to increased bowel absorption. Though a diagnosis of absorptive hypercalcuria type I (AH1) was determined by a calcium load test, the authors did not stratify response to calcium restriction based on this diagnosis. However, almost 75% of patients with urinary CA > 275 mg/day were diagnosed with AH1. The authors propose that the use of a calcium-sparing diuretic and potassium citrate supplementation are additional important considerations to prevent a negative calcium balance with subsequent impact on bone density.

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ENDOUROLOGY & LAPAROSCOPY _____

Robot Assisted Laparoscopic Partial Nephrectomy: Initial Experience
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Purpose: Advances in laparoscopy have made laparoscopic partial nephrectomy a technically feasible procedure but it remains challenging to even experienced laparoscopists. We hypothesized that robotic assisted laparoscopic partial nephrectomy may make this procedure more efficacious than the standard laparoscopic approach.
Materials and Methods: Ten patients with a mean age of 58 years and mean tumor size of 2.0 cm underwent robotic assisted laparoscopic partial nephrectomy and another 10 with a mean age of 61 years and mean tumor size of 2.18 cm underwent laparoscopic partial nephrectomy, as performed by a team of 2 surgeons (MS and ST) between May 2002 and January 2004. Demographic data, intraoperative parameters and postoperative data were compared between the 2 groups.
Results: There were no significant differences in patient demographics between the 2 groups. Intraoperative data and postoperative outcomes were statistically similar. In the 10 patients who underwent robotic assisted laparoscopic partial nephrectomy there were 2 intraoperative complications. There was 1 conversion in the laparoscopic partial nephrectomy group.
Conclusions: Robotic assisted laparoscopic partial nephrectomy is a safe and feasible procedure in patients with small exophytic masses. The robotic approach to laparoscopic partial nephrectomy does not offer any clinical advantage over conventional laparoscopic nephrectomy.

Editorial Comment
Advances in laparoscopy allowed surgeons to perform complex reconstructive and ablative surgical procedures. Laparoscopic partial nephrectomy is the best example to depict these innovations where accuracy, speed and surgeon's expertise must work in concert. Robotic surgery may bring some advantages to the novice laparoscopists when performing laparoscopic radical prostatectomies but for nephron-sparing nephrectomies does not appear to help. Although the authors acknowledge the need of randomization of larger number of patients for clinical

validation, this study is a pioneer comparing laparoscopic partial nephrectomy (LPN) versus robotic assisted laparoscopic partial nephrectomy (RALPN). Interestingly, the authors believe that the distance between the surgeon and the sterile surgical field may have decreased the threshold to convert the RALPN to a hand assisted or open procedure. Other potential disadvantages of the robotic system are cost, training, equipment malfunction and setup time. Additionally, while LPN can safely be performed with a primary surgeon and an assistant, RALPN is a procedure that must be done with 2 experienced surgeons. In conclusion, RALPN is not ready for primetime yet.

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Comparison of Laparoscopic Partial Nephrectomy and Laparoscopic Hand Pain During Hand Assisted Laparoscopic Nephrectomy - An Ischemic Event?

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Purpose: The etiology of hand discomfort during hand assisted laparoscopic nephrectomy may be ischemic in nature. We determined if pneumoperitoneal pressure sustained to the hand during hand assisted laparoscopic nephrectomy poses an occupational risk, contributing to local hand hypoxia and resultant extremity pain.
Materials and Methods: A total of 442 measurements of hand oxygen saturation were made during hand assisted laparoscopic nephrectomy. A Nellcor(r) OxiMax(tm) Max-1(r) oxygen sensor was attached to the left index finger of each surgeon and hand assisted laparoscopic nephrectomy was performed using a LapDisc(r) at 15 mm Hg pneumoperitoneal pressures. Local hand oximetry readings and a numerical pain distress scale (range 0 to 10) were recorded every 2 minutes. To control for motion artifact oximetry readings were taken during hand motion and at rest. The Student t test was used to compare differences in local hand oxygen saturation and hand pain in and between study groups.
Results: A history of hand pain during hand assisted laparoscopic nephrectomy was significantly associated with local hypoxia during operative motion and at rest (p= 0.023 and 0.012, respectively), even with an adequate fascial incision and standard pneumoperitoneal pressures. During hand assisted laparoscopic nephrectomy hand pain was most significantly associated with local hypoxia after 24 minutes (p 0.0002), when local oxygen saturation was 56% to 88%.
Conclusions: A cohort of urologists is predisposed to ischemic hand pain during hand assisted laparoscopic nephrectomy. The etiology of this pain may be hypoxic in nature, attributable to pneumoperitoneal pressure decreasing perfusion and causing venous congestion or regional local ischemia. Circumferential antebrachial constriction from the LapDisc(r) does not seem to be a significant contributing factor in the presence of an adequate fascial incision. Hand pain secondary to ischemia is most significant after 24 minutes at 15 mm Hg. Future studies in more subjects are called for to validate these findings to elucidate which surgeons are predisposed to this potential occupational hazard and what perioperative measures can be taken to avoid hand pain during hand assisted laparoscopic nephrectomy.

Editorial Comment

Hand assisted procedures allowed less experienced laparoscopic surgeons to offer a less invasive approach to their patients with results comparable to purely laparoscopic surgery; i.e.; radical nephrectomy.

Unfortunately, the causes of hand numbness and/or pain have never been completely elucidated, i.e. fascial length and compression, pneumoperitoneum, etc.

Interestingly, this paper demonstrated that after 24 minutes of pneumoperitoneum (15 mm of Hg) the surgeon's hand would suffer hypoxia that may trigger symptoms of discomfort and pain. For surgeons that would occasionally perform this type of surgery may not suffer the effects of local hypoxia but for those who would routinely perform hand-assisted procedures that would last more than 24 minutes should be aware of this occupational risk and take precautions to prevent from chronic problems.

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IMAGING _____

Prophylaxis of Contrast Material-Induced Nephropathy in Patients in Intensive Care: Acetylcysteine, Theophylline, or Both? A Randomized Study

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Purpose: To prospectively compare the protective effect of acetylcysteine, theophylline, and both agents combined in patients who are admitted to the intensive care unit with at least one risk factor for contrast material-induced nephropathy and who receive at least 100 mL of iodinated contrast medium.

Materials and Methods: Institutional ethics review board approval and informed consent were obtained. A total of 91 patients (mean age, 58.5 years+/-14.8 [standard deviation]; 31 women, 60 men; 150 examinations) were admitted to the intensive care unit with at least one risk factor for contrast-induced nephropathy and received either (a) 200 mg theophylline 30 minutes before contrast medium administration (group T), (b) 600 mg acetylcysteine twice daily on the day of and (if possible) the day before the examination (group A), or (c) both agents combined (group AT). The primary endpoint for this study was the incidence of contrast-induced nephropathy (chi2 test).

Results: Groups T, A, and AT were comparable with regard to baseline creatinine levels and the amount of contrast medium administered. The incidence of contrast-induced nephropathy in groups T, A, and AT was 2%, 12%, and 4%, respectively, and was significantly lower in group T than in group A ($P = 0.047$). There was no significant difference in the incidence of contrast-induced nephropathy between groups A and AT ($P = 0.148$) or between groups T and AT ($P = 0.53$). For group A, serum creatinine did not change after 12, 24, or 48 hours compared with baseline. Creatinine levels in group T decreased 12 hours (1.19 mg/dL+/-0.58; $P = 0.008$) and 48 hours (1.16 mg/dL+/-0.55; $P = 0.034$) after contrast material injection compared with baseline (1.25 mg/