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Effect of an Aggressive Bowel Preparation on Post Operative Constipation after Donor Nephrectomy

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BACKGROUND

The first laparoscopic donor nephrectomy was performed in 1995. It is generally considered to be a safe procedure although significant complications have been reported in the literature. At UC San Diego Medical Center, laparoscopic donor nephrectomy is the standard of care for procurement. Initially the average length of stay ranged from three to five days while national average ranges from one to two days. Anecdotal reports from staff nurses describe multiple post-operative complications that include delayed return of bowel function as evidenced by inability of patients to pass flatus, constipation, nausea or vomiting, and ileus. In March 2009, a more aggressive pre-operative bowel preparative regimen supplemented by a post-operative bowel management program was implemented to decrease gastrointestinal complications and to reduce the length of stay.

METHODS

Thirty-one patients who underwent laparoscopic donor nephrectomy between March 2009 to August 2009 were instructed on an intensive bowel preparation consisting of a clear liquid diet one day before surgery, one bottle of magnesium citrate taken orally the evening before the surgery and fasting after midnight on the day of surgery. Post-operatively, patients received a patient-controlled analgesia with hydromorphone or morphine sulfate



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Renal Transplant Living Donor Care Chart

Element of Care	Pre-Op	DOS	POD1	POD2/Discharge
	Date: _____ Time: _____ Initial: _____	Date: _____ Time: _____ Initial: _____	Date: _____ Time: _____ Initial: _____	Date: _____ Time: _____ Initial: _____
Activity	Up ad lib	Up ad lib as tolerated	Ambulate TID as tolerated Perform leg exercises	Ambulate TID as tolerated Perform leg exercises
Diet/Nutrition	Clear liquids at noon the day before surgery. 10 oz bottle of Mag Citrate with 8 oz of clear liquid at 6pm. NPO after midnight the night before surgery.	Ice chips Sips of clears	Clear liquid for breakfast Regular diet for lunch	Regular diet as tolerated
Assessment/ Monitoring	Height/Weight Vital Signs	Vital signs with O2 sat q4h x24h Strict I&O Check foley catheter for patency Incision (infection, bleeding) Nausea/vomiting Fall risk	Routine VS with O2 sat q8h Maintain strict I&O D/C foley catheter Incision (infection, bleeding) Nausea/vomiting Fall risk Check for bowel sounds, flatus	Routine VS with O2 sat q8h Maintain strict I&O Incision (infection, bleeding) Nausea/vomiting Fall risk Check for bowel sounds, flatus
Pain Control		PCA Dilaudid Turning & repositioning	Discontinue PCA Oral narcotics Monitor for pain, medicate and document response Toradol 15 mg IV x1 if still has pain,may repeat x1 as ordered Splint with pillow	Oral narcotics Monitor for pain, medicate and document response Toradol 15 mg IV x1 if still has pain,may,repeat x1 as ordered Splint with pillow
Treatments/Procedures	H&P Consent signed	Sequential compression device while in bed	Sequential compression device while in bed	Discontinue sequential compression device Continue ambulation as tol.
Respiratory	Incentive spirometer (IS) teaching	Supervise use of IS 10 x qh while awake Encourage TCDB q2h	IS 10x qh while awake and TCDB q2h	IS 10x qh while awake and TCDB q2h
Medications/IV fluids		IVF IV narcotics Antiemetics PRN Analgesics PRN	Discontinue IV fluids PO narcotics Colace 250mg BID Senna 8.6mg PO daily If needed dulcolax supp. MOM,mineral oil	IVHL PO narcotics Colace 250mg BID Senna 8.6mg PO daily If needed,dulcolax supp.,MOM,mineral oil
Diagnostic/Laboratory tests	Final crossmatch – 2 units PRBC available U/A CBC/CMP	Check CBC 6 hours post - Op to make sure pt. is not bleeding	Monitor labs (CBC,BMP,Magnesium) UA/Cx when foley out	Monitor labs (CBC,BMP,Magnesium)
Psychosocial	Evaluation by independent living donor advocate	Monitor emotional well-being Request consult if necessary Allow patient to follow-up recipient's condition	Monitor emotional well-being Request consult if necessary Allow patient to follow-up recipient's condition	Monitor emotional well-being Request consult if necessary Allow patient to follow-up recipient's condition
Patient/ Family Education	Physician instructions: procedure anticipated, risks Pre-op processes: when, where to arrive for surgery	Post-op processes: routines to anticipate, TCDB, IS use, PCA use	Reinforce teachings: Begin discharge teaching Teach when/how to request for pain medication May have shoulder pain from gas used during surgery Importance of ambulation	Discharge teaching Educate on pain medication, stool softeners Instructions to include balanced fiber/bulk in diet Promote adequate fluid intake to prevent constipation Call transplant clinic if no BM by POD 3 Educate S/S of infection Call if temp>100.5, excessive redness, swelling, bleeding, or increasing pain,low urine output No lifting >10lbs for 6 wks Follow up appmt. POD 7
SIGNATURE	INITIAL	SIGNATURE	INITIAL	SIGNATURE



and prophylactic laxatives including senna and docusate sodium. Results were compared to a control group consisting of twenty-one patients who underwent laparoscopic live donor nephrectomy between the months of July 2008 and February 2009. Retrospective data for the control group was obtained from a review of the medical records.

RESULTS

Seventy seven percent of the interventional group (N = 24) were discharged to home on post-operative day two with no complications and no readmissions. Of the remaining seven patients who stayed beyond post-operative day two, six stayed for convenience and patient preference and only one had a significant complication

that required admission to a higher level of care. Implementation of a strict bowel preparation resulted in a reduction of post-operative gastrointestinal complications and in the length of stay from three to five days to one to two days.

CONCLUSIONS

This study was able to demonstrate that the use of a strict bowel preparation and a post-operative bowel management program is associated with a faster return of normal bowel function and reduction in the hospital stay post-operatively for patients undergoing laparoscopic live donor nephrectomy.

Donor Live Nephrectomy Hospitalization

