Evaluating the utility of postoperative subcutaneous low suction drains for the prevention of wound-related complications in obese renal transplant recipients

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Background

- Renal transplantation is the preferred and optimal treatment option for most patients with end stage renal disease (ESRD)[1]
- A growing proportion of patients with end stage renal failure are obese (BMI >30)[2]
- Obese end stage renal failure patients have better quality of life and reduced mortality with kidney transplantation versus being on dialysis[3]
- Obese transplant recipients have higher rates of delayed graft function, higher wound-related complications, and prolonged length of post-operative hospital stay[4]
- Wide spectrum of post-operative complications exist in the obese renal transplantation population including:
  - Superficial and deep infections, dehiscence, evisceration, and hernia
- Any intervention that attempts to reduce risk of complications is worth exploring in this population

Objectives

- To determine if the placement of a low-suction subcutaneous drain (Jackson-Pratt®) at the time of kidney transplantation in obese recipients is protective against wound-related complications in the early post-transplant period.

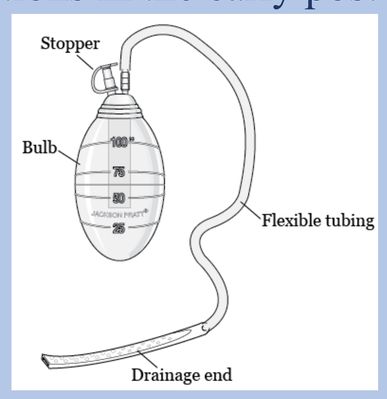

Figure 1: Jackson-Pratt (JP)® drain

Methodology

- Retrospective chart review conducted for all renal transplantation patients at The Ottawa Hospital from July 1st 2009 through December 31st 2016 (approximately 500 records)
- Patients stratified into the following three groups:
  - Group 1: BMI 30-39
  - Group 2: BMI ≥ 40
  - Group 3 (control): BMI <30
- Subcategories also coded include:
  - Age, Sex
  - Cause of ESRD
  - Date of transplant
  - Jackson-Pratt® drain vs no drain intraoperatively
- Endpoint variables include:
  - Delayed graft function vs immediate graft function
  - Length of stay
  - Kidney function (Cr/eGFR) at 1 week, 4-6 weeks, 6 months, and 1 year
  - Wound infection post-operatively?
    - If so, what type and what treatment was provided?
  - Functioning graft at last follow up appointment?

Results

- Data is continuing to be collected and analysis has not been conducted at the time of this presentation.

Significance

- Once data is extracted, statistical analysis will be performed to identify any statistical or clinical difference between groups receiving a JP drain
- The results of this study will provide grounds for future randomized controlled trials to verify findings
- Results will inform future standardized guidelines with respect to JP drains in obese individuals receiving renal transplant
- A possible reduction in length of stay and post-operative complications will have significant impact on healthcare costs

Future Directions

- Determine if JP drains are the optimal intervention versus other vacuum suctioning drains
- Evaluate other interventions that could be implemented to improve post-operative outcomes in obese renal transplant recipients

References

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