Retrospective review of patients that had percutaneous cholecystostomy tube placement at UCDHS with long-term follow-up

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Background

- Cholecystectomy is the gold standard treatment for patients with acute cholecystitis.
- Patients who are high risk for complications from cholecystectomy can be offered a minimally-invasive image-guided percutaneous cholecystostomy tube (PCT) to drain the inflamed/infected gallbladder.
- Elective cholecystectomy is ideal following PCT as the risk for (recurrent) cholecystitis is high.
- If the patient remains unsuitable for surgery, PCTs may need to be left in indefinitely (with occasional fresh tube exchanges) to prevent bile peritonitis.
- Gallbladder thermoablation is an emerging, minimally-invasive technique that may be beneficial to patients who are not surgical candidates after PCTs.

Objective

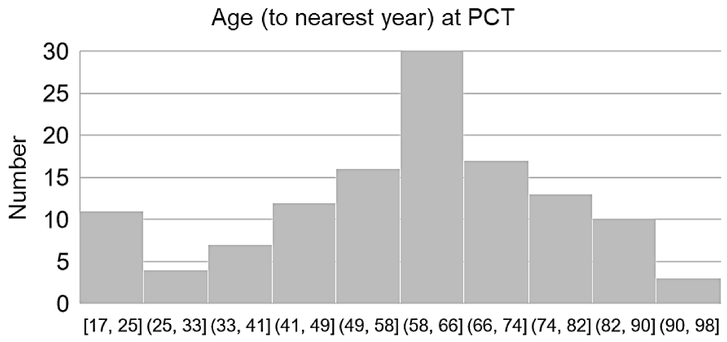
- The study aim was to characterize the population of patients who had a PCT and evaluate long-term outcomes in preparation to offering gallbladder thermoablation at UCD.

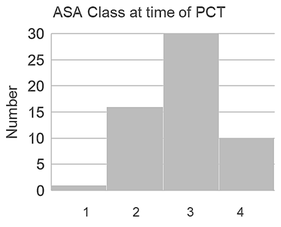
Methods

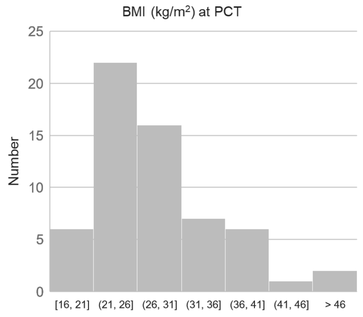
- Retrospective IRB-approved query of UC Davis Radiology Picture Archiving and Communication System (PACS) for patients who had received a PCT between 2002-2016, allowing for at least five years of potential follow up time.
- 129 patients were identified to have PCTs in PACS over this period. 122 patients had their initial tube placed by UC Davis.
- Chart review of the above patients was done to evaluate characteristics of patients who'd received a PCT.

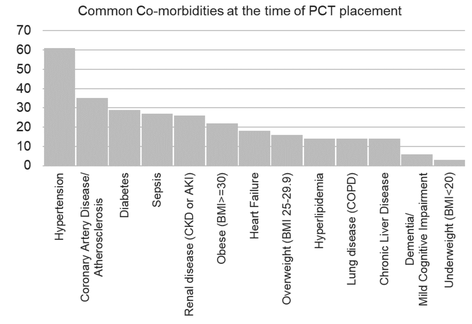
Results

Demographics at PCT placement		
Age at PCT (yrs)		
	Mean	58.67
	Range	17-98
Weight (kg)		
	Mean	82.5
	Range	40.8-176.5
BMI (kg/m2)		
	Mean	28.5
	Range	16-62.9
M/F ratio		1.6
Self-reported race or ethnicity		
	African American/Black	12
	Asian	14
	Caucasian/White	51
	Mexican American, Hispanic or Latino	20
	Middle Eastern	1
	Pacific islander (Filipino, Native Hawaiian)	3
	Unknown	12



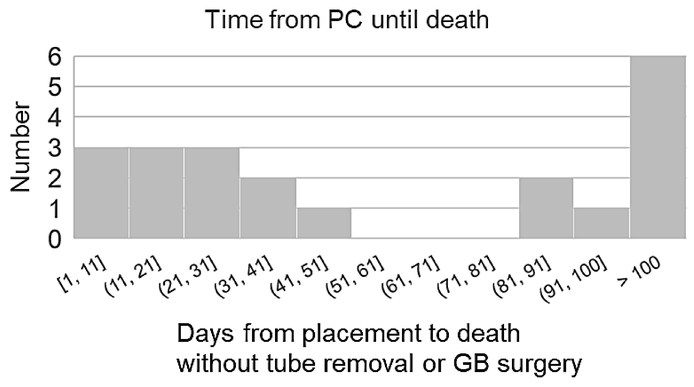






Days between PC and outcome	Mean	Median
Removal (n=54)	95	63
Cholecystectomy (n=41)	162	99
Death with tube in place (n=21)	202	36

*Does not add up to 122 due to loss of follow-up.



Analysis/Conclusions

- The average age of patients receiving PC was younger (average age <59) than expected based on literature, where the average age is reported around 67.
- Most patients were ASA class 2 and 3 at the time of PC.
- Patients who had eventual tube removal or cholecystectomy had the tube in place for an average of 3.1 or 5.2 months, respectively.
- 43% of patients that died before PCT removal or cholecystectomy had the tube in for about 3 months or longer and may benefit from minimally invasive gallbladder thermoablation.

Further Study

- In offering gallbladder thermoablation, further study is needed to assess any impact on morbidity, mortality and the quality of life in comparison to indefinite PCT in patients who are poor surgical candidates.
- Technical details regarding the optimum thermoablative modality (e.g. cryoablation, radiofrequency ablation, microwave ablation, cryochemoablation) also need to be studied.

References & Acknowledgement

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- Thanks to the UCD SOM MSRF