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COMPLICATIONS FROM PARACENTESIS
FOR MALIGNANT ASCITES AT A
TERTIARY CANCER CENTRE

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Introduction:

- Paracentesis is the most common procedure to manage malignant ascites with a complication rate of around 20% ¹.
- Median survival from diagnosis of malignant ascites to death is reported in the literature as 5-6 months ².

Objectives:

- To investigate the rate of complications with day-case paracentesis in a tertiary cancer centre
- To assess factors associated with survival.

Method:

- A retrospective study of all day case paracentesis (excluding hepatocellular carcinoma and non-malignant cirrhosis) performed in one ambulatory oncology unit November 2015 to May 2017.
- Case notes were reviewed for patient demographics and details of each episode of paracentesis.
- Rate of complications and proportion of patients requiring admission following day case paracentesis was collected.
- Median survival was calculated using Kaplan Meier methods and compared in patients who had complications versus those who did not using the log-rank test

Results:

Table 1 Patient Demographics Patients (n = 48)				
Tumour classification		n (%)	Gender	%
Breast		11 (23)	Female	89
Gynae	Uterine	2 (4)	Male	11
	Ovarian	12 (25)	Age at first paracentesis	Years
	Fallopian tube	1 (2)		
	Endometrial	1 (2)		
	Cervical	1 (2)	Median	59
	Peritoneal	3(6)		
GI	Pancreatic	4 (8)	Range (IQR)	28-80 (53-70)
	Neuroendocrine	1 (2)	Underlying liver disease	n
	Gastric	5 (10)		
	Colorectal	3 (6)		
	Cholangiocarcinoma	2 (4)	None	25
Renal		2 (4)	Metastatic	23

Table 2 Variables Paracentesis episodes (n = 128)			
Time between paracenteses	Days	Paracenteses per patient	n
Median	21	Median	2
Range (IQR)	2-365 (14-35)	Range (IQR)	1-7 (1-3)
Location of paracentesis	%	Volume drained	L
Ambulatory care unit	61	Median	5
Radiology (PleurX™)	16	Range (IQR)	0.3-20 (4-7)
Radiology (Temporary)	17	Admission length	days
		Median	3
Ward	6	Range (IQR)	1-38 (1 – 7.5)

- Admissions:
- Admission was required after 5.4% of paracentesis episodes as detailed in table 3:

Table 3: Reason for admission	Number of paracentesis episodes (n=128)
Failed insertion	1
Routine observation - (large volume paracentesis or paracentesis performed late in the day)	21
Spontaneous bacterial peritonitis	2
Slow drainage rate	3
IV albumin administration	3
Unrelated to paracentesis	27

- 14 patients had an admission >7 days - 2 out of 14 (14%) of these were due to a complication of paracentesis, the remainder being unrelated.

Complications:

- 8.3% of patients experienced a complication following paracentesis as shown in figure 1:

- 1 patient required ITU admission <48 hours after paracentesis due to acute kidney injury, hepatic encephalopathy and hyponatraemia.

Survival:

- Overall survival is shown in figure 2.
- Despite small numbers, there was a significant difference in survival between patients who did and did not develop complications following paracentesis (p<0.000).
- Median survival from first paracentesis to death was 145 days (95% CI, 53-243). Three of 48 patients (6%) died <14 days during admission following paracentesis, all from progressive disease.

- PleurX™:
- 16 patients had a PleurX™ drain inserted after a mean number of 2.75 (IQR 2-4) paracenteses.

Conclusions:

- Day case paracentesis can be performed safely with a lower rate of complications in our centre but similar median survival from first paracentesis compared to the literature².
- The use of medical management and PleurX™ catheters are potentially under-utilised in this patient group.

References:

- Becker G. et al Malignant ascites: systematic review and guideline for treatment. Eur J Cancer. 2006;42(5):589-97
- Ayantunde AA., Parsons SL. Pattern and prognostic factors in patients with malignant ascites: a retrospective study. Ann Oncol. 2007;18(5):945-9