

Short term outcomes following cytoreductive surgery and heated intraperitoneal chemotherapy in Waikato, New Zealand



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Introduction

Cytoreductive surgery with heated intraperitoneal chemotherapy (CRS with IPC) has been well established as a standard of care for the treatment of pseudomyxoma peritonei.^{1,2} Waikato is one of only two centers in New Zealand receiving nationwide referrals for CRS. The technique was first introduced at our institution in 2008 and the following study examines our early experience with CRS with IPC to the year 2014.

Method

Records for all patients presenting to surgery for CRS with IPC were retrospectively reviewed. CRS with IPC was performed in accordance with the techniques described by Sugarbaker.^{3,4} Data recorded included patient characteristics, characteristics of surgical treatment and post operative outcome.

Results

Sixty eight patients underwent 72 procedures with the intention of performing CRS with IPC. Fourteen patients were deemed to be incurable at the time of surgery. Fifty four patients subsequently underwent 58 cases of CRS with IPC. Four cases were redo operations whereby further CRS with IPC was performed for 4 patients who developed recurrent disease.

Number of Patients	
Public	48
Private	20
Unresectable	14 (4 private, 10 public)
Redo cases	4 (2 public, 2 private)
Patient characteristics	
Median age (range)	57 (30-80)
Sex	
Male	28
Female	40
Median BMI (range)	28 (20-45)
Median ASA	2
Mode of Presentation	
Abdominal pain	32
Abdominal distension	18
Abdominal mass	7
Surveillance	11
Hernia	4

	Complete	Incomplete	Total
Pseudomyxoma	40	8	48
Appendix adenocarcinoma	2	2	4
Adenocarcinoid	1	2	3
Colon cancer	5	4	9
Mesothelioma	3	0	3
Ovarian cancer	1	2	3
Gastric cancer	1	0	1

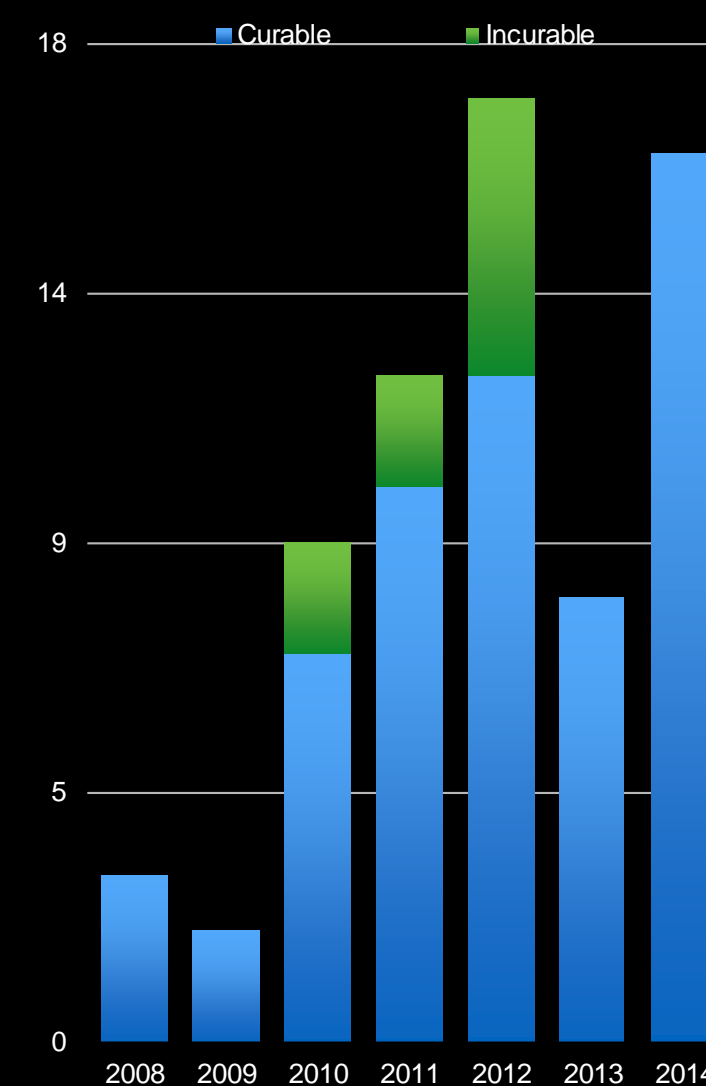


Figure 1: Number of cases per year

Of the 58 cases where CRS with IPC was performed, the median PCI at laparotomy was 19.5 (3-39). The median operative time was 9.08 hours (range 5.43-15.20 hours). The median number of visceral resections was 2 and the median number of peritonectomies was 4. Thirty of the 58 cases treated with CRS with IPC required a stoma of some type (21 end ileostomies, 7 loop ileostomies, 2 end colostomies). Twenty three patients required a blood transfusion with a median of 4 units of red blood cells.

Clavien-Dindo Grading	Number
Grade 1	6
Grade 2	6
Grade 3a	5
Grade 3b	11
Grade 4a	1
Grade 5	1
	Total 30

Table 3: Number of patients with complications, grouped by most severe complication by Clavien-Dindo grading

Complication Type	Number
Anastomotic leak	3
Bowel obstruction	1
Gastric perforation	1
Enterotomy	1
Bleeding	1
Bile leak	1
Wound complication	2
Removal of drain end	1
	Total 11

Table 4: Number and reasons for reoperation

Thirty patients experienced complications (42%), 3 of whom were one of the 14 incurable patients (1 medication side effect, 1 relook laparotomy for a wound complication and 1 death). Seventeen patients (24%) had a grade 3 or 4 Clavien-Dindo complication. One out of the 72 cases died within 30 days (incurable patient), giving an overall 30 day mortality rate of 1.4%. The median duration of hospital stay was 12 days (range 5 to 104 days), although was only 8.5 days (5 to 21 days) for those who had incurable disease. This did not take into account length of hospital stay for patients transferred to referring hospitals.

Conclusion

Short term outcomes following CRS with IPC at Waikato are comparable to those published in the literature.^{1,2} Further follow up is anticipated for the publication of our survival and recurrence data.

References

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