

New Zealand Experience of Pressurised intraperitoneal aerosol chemotherapy (PIPAC): a case series

Dr B. Goodwin, MBChB | Mr S. Lolohea, BHB, MBChB, FRACS | Mr J. Ly, MBChB, FRACS

Introduction

Pressurised intraperitoneal aerosol chemotherapy (PIPAC) is a novel drug delivery system capable of inducing regression of peritoneal metastasis in non-resectable peritoneal carcinomatosis (PC).

Peritoneal carcinomatosis, defined by the presence of metastatic malignant deposits on the peritoneal surface, is a common development in abdominal gastrointestinal and gynaecological cancer.

It is associated with a poor prognosis and most patients receive palliative treatment. Life expectancy ranges from 3-6 months for gastric cancer primary to 5.2-12 months for colorectal cancer.

PIPAC was first trialled in 2011 and since then has been utilised in many countries for treatment and palliation of peritoneal carcinomatosis of varied origins.

Aims

The purpose of this retrospective, single centre, case series is to evaluate the postoperative outcomes of PIPAC in New Zealand patients with peritoneal carcinomatosis from several tumour origins.

Methods

Patients having had at least one PIPAC procedure were identified and clinical notes reviewed. The intended treatment course was administration of three procedures, six weeks apart.

Results

Patient characteristics, operative findings, and perioperative outcomes were recorded.

A total of 12 procedures were performed in five patients between August 2018 and April 2020. The tumour origins included; Primary peritoneal, Appendix adenocarcinoma, gallbladder and advanced pseudomyxoma peritonei.

The median hospital stay was one day, no major complications were seen. Three patients completed all three procedures. One was sufficiently downstaged to proceed with CRS and HIPEC after only two procedures. One patient was not well enough to undergo subsequent procedures due to advanced disease and frailty.

Four patients were still alive at 12 months with two still alive at 19 months. One passed away two months after the first procedure.

Conclusions

Our results are in keeping with international literature and show the feasibility and safety of PIPAC administration with minimal morbidity and short hospital stay.

Further implementation is needed to investigate its benefit in terms of long term survival, and help refine patient selection and role with respect to other therapies.

Furthermore as evidence of efficacy and safety grows the question of equity of access becomes increasingly important.

Having a procedure which can provide effective palliation of symptoms and in many cases clinically significant regression of disease not available in the public sector serves as a barrier to those from lower socioeconomic backgrounds.