









Hoskovec D., Dytrych P., Vočka M., Krška Z., Skála R.

MCR-4 TOPOL® new device for PIPAC – first clinical use

Introduction

PIPAC is promising technique for intraperitoneal delivery of chemotherapy. It is indicated in cases of peritoneal carcinomatosis which is not suitable for cytoreductive surgery and HIPEC

There has been only one device on the medical market since publication of this method, but several companies worldwide are working on its own device.

Czech company Skala Medica s.r.o. developed original Czech product for PIPAC (and PITAC) miniinvasive surgical atomiser MCR-4 TOPOL®. This device is patented and has EC certification

Patients and Method

We have used MCR – 4 TOPOL® in four patients in 2021.

Technical data of MCR - 4 TOPOL®

Length 216 mm Diameter 8 mm

Nozzle diameter 0,35 mm Spray angle 80°

Operational pressure 100 - 330 psi

Patients

Gall bladder cancer (GB) – accidental finding in the specimen after laparoscopic cholecystectomy. Indicated for reoperation, but peritoneal seeding was found. Indicated for PIPAC, PCI 4

Gastric cancer (G) – patients after neoadjuvant chemotherapy diagnostic laparoscopy PCI more than 12 NET – patient with liver cirrhosis on waiting list for transplantation, during transplantation peritoneal tumours were found and NET confirmed. Due to liver insufficiency unable for standard oncological treatment.

Serous carcinoma (SC) – indicated for CRS + HIPEC but during laparoscopy PCI about 18 was fond so we switched for PIPAC.

We used cisplatin7,5 mg/m² and doxorubicin 1,5 mg/m² in three cases. Cisplatin only was used in patient with NET. The interval between PIPAC was 6 weeks.

The effect of the treatment was evaluated according to PCI (sPCI), Peritoneal regression grading score (PRGS) and ascites amount. We use standard fotodocumentation in all cases. Clavien Dindo classification was used for rating of complications.



Tumour	Number of PIPAC	Regressi on of PCI	PRGS	Ascites	Complicatio n C-D 3 and above	Reason for finishing
GB	4	No	3	0	0	Progression
G	3	No	2	0	0	Progression
NET	3	No	4	2000 ml (cytology negative)	0	Non responder
SC	2	Yes	3	minimal	0	Waiting for next PIPAC

All patients were discharged 2nd or 3rd postoperative day. We do not have serious postoperative complication. PIPAC with MCR – 4 TOPOL® was effective on one patients.

Conclusion

MCR-4 TOPOL® is a second device for PIPAC and PITAC on the market. The use is easy and simple. PIPAC with MCR – 4 TOPOL® is well tolerated method similar like in other nebulisers on the market. We noticed clinical effect one patients but the group is small and heterogenic.

