Tumour grade and complete tumour removal affects survival after cytoreductive surgery and HIPEC for Pseudomyxoma Peritonei (PMP) of appendiceal origin.

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Introduction

• PMP
  
  • Mucinous ascites
  • Abdominal distension

• Origin – Appendix in ~ 90% cases

• Majority (~80%) are low grade

• Blood borne and lymph node metastasis is unusual

• Chemotherapy has no established role in low grade PMP
Classification

- Diverse nomenclature of PMP
  - Low grade appendicular mucinous neoplasm (LAMN)
  - Mucinous adenocarcinomas (MACA)
  - Disseminated peritoneal adenomucinosis (DPAM)
  - Peritoneal mucinous carcinomatosis (PMCA)

- WHO classification of PMP (2010)
  - Low Grade
  - High Grade
Low grade - jelly
High Grade

• Small Bowel involvement
Surgery

• Complete Cytoreductive Surgery (CCRS) with Hyperthermic intraperitoneal chemotherapy (HIPEC) is optimal treatment for PMP (Sugarbaker technique)

• Maximal tumour debulking (MTD) is helpful in selected patients when complete tumour removal is unachievable.
Low grade
Aim

- Analyse the outcomes following CCRS and HIPEC or MTD for appendiceal tumours based on tumour grade.
Methods

- 791 consecutive patients - prospective database.
- Surgery at a National PMP Centre in the UK at Basingstoke
- March 1994 and December 2012.
- Appendix tumour graded as Low Grade (LG) or High Grade (HG).
  (WHO classification)
- Treatment was classified as CCRS or MTD
- 5-year Overall Survival (OS) and Disease-Free Interval (DFI) calculated
Results

- Surgery Performed
  - CCRS n=559 (28%)
  - MTD n=213 (70%)
  - Laparotomy & Biopsy n=24 (2%)

- Grade of tumour
  - LG (83%)
  - HG (17%)
Results

- Females: 499 (61.5%)

- Age: Median 57 years (20 – 84)

- FU: Median 27 months (6 – 180)
5 year overall survival and disease free interval

- 5 yr OS
- 5 yr DFI
Kaplan – Meier plots

Overall Survival - CCR

Complete Cytoreduction (n=571)

P=0.001
Kaplan – Meier plots

Overall Survival - MTD

Maximal Debulking of Tumour (n=220)

P = 0.001
Kaplan – Meier plots

DFI

- Low Grade (n=465)
- High Grade (n=106)

Complete Cytoreduction (n=571)

P=0.001
Hazard Ratio

- HR (OS)
  - CCR 2.2  (95% CI: 1.3 - 3.8)
  - MTD 2.7  (95% CI: 1.9 - 3.9)

- HR (DFS)
  - CCR 2.4  (95% CI: 1.7 - 3.6)
Conclusion

• Complete cytoreductive surgery and HIPEC achieves 83% five year overall survival if tumour is LG and 68% if tumour is HG. *(optimal cytoreduction achieves the best result)*

• Where CCRS is not achievable patients with HG tumours have a poor prognosis.

• Careful selection of patients with high grade appendiceal pathology is required to maximize outcomes

• Additional strategies including systemic chemotherapy may be required for HG tumours.
Questions?