The Hyperthermic Intraperitoneal Chemoperfusion (HIPEC) in the combined treatment of locally advanced and disseminated gastric cancer (GC).


**Purpose:** Irrespective of the increased aggressiveness of surgical and combined treatment modalities the Intraperitoneal Recurrence (IR) still remain the major problem after radical surgery in cases of locally advanced gastric cancer (GC). On the other hand the majority of patients with metastatic GC have peritoneal carcinomatosis. The standard treatment options with systemic chemotherapy cannot alter their dismal prognosis.

**Materials:** Between 1.1.02 and 31.03.10 - 31 patients with locally advanced (pT3-4N+) and disseminated (P1-2) gastric cancer (Curability B - 11 cases and Curability C- 20 cases) and 1 ptnt with IP recurrent GC underwent surgical treatment with HIPEC. Women were predominant – 17 (53,1%). Mean age was 56,8±1,7 years (interval 32 till 67 years). Total gastric wall infiltration was diagnosed in 13 cases (40,6%). In 17 cases tumour infiltration of cardia with esophageal involvement was diagnosed (53,1%). Infiltrative tumour growth types (Borrmann 3 and 4) were predominant – 29 cases (90,6%). In 23 cases (71,9%) combined treatment modality (surg+HIPEC) was applied, though in 9 cases induction treatment was used (in 5 cases (15,6%) in NIPS mode). Resectional type of procedure was done in 27 cases: Curability B in 12 cases (37,5%), type C in 15 cases (46,9%). The majority of pts had signet ring cell (14 cases (51,9%)) or low differentiated AC (5 cases (18,5%)). In 13 cases (44,8%) R0 resection was feasible, though in 12 cases R1 and in 4 cases R2 resection was done. In 24 cases complete CC-0 cytoreduction was feasible (75,0%). The IV stage was the most frequent – 18 cases (56,3%).

The main procedure was total gastrectomy (69,4%) combined with splenectomy (47,2%) or pancreato-splenectomy (22,2%). D2 LND was done in 75%, thou extended D3 LND was done in 25%.

The mean duration of the procedure was 346±80 min and the HIPEC was performed for 90 min with the average temperature 44,0 C. There were no intraoperative complications.

**Results:** Postoperative mortality was observed in 1 case (3,1%). Uneventful recovery was observed in 23 cases (82,1%). Subphrenic abscess and IP hemorrhage were diagnosed in 1 case each (3,1%). For the whole group mean and median survival were 23±4 and 12±5 month with 5-y. survival 23%. In the stratification subgroup analysis best results were observed in Cur. B group with mean survival 46±6 months and median survival not reached. In Cur. C group mean and median survival were 10±2 and 7±3 months. In the palliative subgroup best results were gained in pts with free cancer cells (Cy+) – mean survival was 24±9 months with median survival 12±7 months.

**Conclusions:** The HIPEC is a feasible procedure that does not increase the intraoperative and postoperative morbidity and mortality and can be combined with radical or palliative surgical procedures improving the long-term results. To draw final conclusion a prospective randomized trials are needed in stratified groups of patients.