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# NEO-ADJUVANT CHEMOTHERAPY IN OPERABLE ESOPHAGEAL SQUAMOUS CELL CANCER: AN INTERIM REPORT OF A RANDOMIZED CONTROLLED TRIAL

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**METHODS:** A multicentre prospective randomized controlled trial was initiated for patients (pts) with operable esophageal squamous cell cancer between neo-adjuvant chemotherapy (chemo) followed by surgery (blunt esophageal-cardiac resection with stomach tube reconstruction) versus surgery alone. Endpoint: survival.

**TREATMENT:** Pts with a Karnofsky Index >70%, normal kidney function, and a guaranteed calorie intake were randomized after stratification (sex, age, weight loss, and tumor size) to up-front chemo with Cisplatin (CDDP:80mg/m<sup>2</sup> day 1) and Etoposide (E:100 mg iv day 1+2; 200 mg/m<sup>2</sup> orally day 3+5), q 3 wks, followed by surgery (group A), or surgery alone (group B). After 2 cycles of chemo, a clinical response evaluation was done (ct-scan, endoscopy with biopsies, endoscopic ultrasound); pts with a major tumor response received another 2 cycles followed by surgery, whereas non-responding pts underwent surgery following up the 2<sup>nd</sup> cycle. No post-operative therapy was considered in this protocol. **RESULTS:** Until January '93, 66 consecutive pts entered the study: 49 male, 17 female, med. age 64, weight loss 8%, med. tumor size 6 cm. Group A (n=32): 2 pts inevaluable for response (refusal chemo after randomisation). Response rate 11/30=37% (cCR 2/30). No serious haematological toxicity, no toxic death; 11 pts 4 cycles, 19 pts 2 cycles, 2 pts 1 cycle (early progression). No resection in 6 pts; local irresectable 4, metastases during chemo 2. Med. follow-up 14 months, med. survival 14 months. A major response after chemo predicts survival benefit: 9/11 responding pts are still alive at med. 18 months (9-44). Group B (n=34): no resection in 5 pts; local irresectable 2; distant metastases 3. Med. follow-up 8 months, med. survival 10 months. **CONCLUSIONS:** Neo-adjuvant chemo with CDDP and E is feasible. This interim analysis shows median survival benefit and more longterm survivors in the combined modality treatment group. A further analysis of this ongoing study will be done after 90 entered pts.

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# HIGH RESPONSE RATE OF A CHEMOTHERAPY USING CARBOPLATIN (CARBO) + CISPLATIN (CDDP) + 5-FLUOROURACIL (5-FU) FOR ADVANCED OESOPHAGEAL CANCER. H. Curé\*, D. Pezet\*\*, J. Fleury\*, K. Slim\*\*, Ph. Chollet\*, J. Chipponi\*\* - \* Centre Jean Perrin, 63011 Clermont-Ferrand Cedex, France ; \*\* Département de Chirurgie, Hôtel-Dieu, 63003 Clermont-Ferrand, France.

The aim of this study was to evaluate the efficacy of a regimen using the dose-intensity of platinum compounds combined with 5-FU in continuous infusion (c.i.) for advanced oesophageal cancer. From 02/90 to 08/92, 27 patients (pts), all with W.H.O. PS < 2 and creatinine clearance (Cr.Cl.) > 60 ml/min, received a combination of CARBO (300 mg/sq.m./day (d), d1) + CDDP (25 mg/sq.m./d, d2-d5) + 5-FU (c.i.) (750 mg.sq.m./d, d1-d4). Q4w, for 3 cycles (cy). At inclusion a 25 % reduction dose of CARBO and CDDP was applied when Cr.Cl. was between 60 and 80 ml/min. Group 1 with an initially inoperable local advanced disease (LAD) = 15 pts, mean age 64 years (45-74); localizations: upper third 3, middle third 10, lower third 2; histologic types: epidermoid 10, adenocarcinoma 5. **EFFICACY:** 100 % of disappearance of dysphagia after 1 cy; CT-scan response: 14 pts evaluable (1 toxic early death) with 4 CR, 4 PR > 75 % and 50 % and 2 MR. **TOXICITY** (mainly hematological): for 43 evaluable cy, neutropenia G3-4 = 10 cy (23 %) in 6 pts, thrombopenia G3-4 = 13 cy (30 %) in 9 pts; anemia G3 = 3 cy (7 %) in 3 pts. After chemotherapy 8 pts received surgery (100 % resectability, 1p CR), 6 pts refused surgery and were treated with a concomitant chemoradiotherapy. Group 2 definitively inoperable (5 metastasis, 2 recurrence, 5 LAD) = 12 pts, mean age 61 years (43-72); localizations: upper third 2, middle third 7, lower third 3; histologic types: epidermoid 11, adenocarcinoma 1. **EFFICACY:** clinical response on dysphagia in 9/12 pts; mediastinal CT-scan response: 2 CR, 1 PR > 75 %, 3 PR < 75 % and 50 %, 2 PR < 50 %, 2 SD, 1 progression; metastasis response: 2 CR and 3 progression in 5 pts. **TOXICITY** (mainly hematological): on 36 evaluable cy, neutropenia G3-4 = 7 cy (19 %) in 5 pts, thrombopenia G3-4 = 7 cy (19 %) in 7 pts, anemia G3 = 3 cy (8 %) in 3 pts. After this inductive chemotherapy pts were treated either with the same regimen but at a low dose or with a concomitant chemoradiotherapy. **CONCLUSION:** this inductive regimen seems interesting in neoadjuvant and palliative circumstances (objective OR of 85 % and 70 % respectively).

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# FUNCTIONAL HEPATIC RESERVE AFTER ARTERIAL LIPIODOL-CARBOPLATINUM THERAPY IN CIRRHOTIC PATIENTS WITH HEPATOMA

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Planning the therapy of the unresectable Hepatocellular carcinoma (HCC) is essential to achieve a clear antitumor activity and few side effects upon the cirrhotic liver. Today the so called "targeted chemotherapy" by using ethiozide oil ultrafluid (Lipiodol) as a carrier of intrarterial anticancer drugs seems to achieve these goals. In this study we observed the influence of the Lipiodol-Carboplatinum intrarterial administration upon antipyrine metabolism in 21 pts with liver cirrhosis and unresectable HCC. These were 16 males and 6 females (average age 65 y, range 49-76); all were assigned to Child-Pugh cirrhotic class A. None of them received prior therapy. In each patient the Antipyrine metabolism test (18 mg/Kg/os) and the standard liver function tests were assessed just before and 72 hours after the Lipiodol-Carboplatinum administration. All the patients received Lipiodol 10-15 ml mixed with Carboplatinum 150 mg/m<sup>2</sup> into the common hepatic artery. Seventy-two hours later we observed a transient impairment of Antipyrine metabolism (AP clearance before 0.299±0.12 ml/min/Kg, half-life 30.3±3.9 h, AUC 0-24 h 550±85, 72 h after 0.26±0.11, Half-life 17.6±3.6 h, AUC 0-24 h 538±70, p=0.5), no change on Volume of distribution (VD before 42.4 L, VD after 39.5 L) and a transient rise of serum aminotransferases (AST 85±56 UI/L, ALT 67±36 UI/L, after 275±156 UI/L, ALT 193±147 UI/L, p<0.001). No change was observed on serum albumin, bilirubin and prothrombin activity level. In pts bearing unresectable HCC, even in presence of Child A cirrhosis, the arterial chemoembolization with Lipiodol and Carboplatinum mixture does not influence the functional hepatic reserve.

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# CHEMOTHERAPY (CT) WITH CISPLATIN (DDP) + CONTINUOUS 5-FLUOROURACIL (5FU) IN THE TREATMENT OF ADVANCED ANAL SQUAMOUS CELL CARCINOMA (SCCA)

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The role and type of systemic CT in the treatment of advanced anal SCCa is still controversial. From October 88 to December 92 we treated 18 patients (pts), 13 M, 5 F, median age 59 (range 44-78), 3 with PS (ECOG) 3/4. All had histological proven advanced anal SCCa. 4 pts had locoregional disease, 9 had metastases (met) and 5 had both. All but one received previous treatment, 6 with CT (MFC+5FU)+radiotherapy. 14 pts were evaluable; all were treated with DDP 100mg/m<sup>2</sup>d1+5FU 1g/m<sup>2</sup>d1-5. **Efficacy:** Complete responses (CR) - 6 pts (43%), partial responses - 2 pts (14%) (OAS criteria). Median duration of response - 6 months (m); median survival - 7.5m, with 2 met pts still in CR at 15 and 21m. 6 pts (43%) had treatment limiting toxicities: 1 lacrimal erythema, 1 mucositis, 2 neurological, 2 renal, 2 cardiac and 3 ototoxicities, none of them lethal. Although toxic, DDP+5FU allows for long term control of disease in some patients.

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# GASTRIC CARCINOMA: CONTINUOUS INFUSION 5-FLUOROURACIL PLUS CISPLATIN: DOSE INTENSIFICATION STUDY

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Between 3/88 and 12/92, 40 consecutive patients with advanced gastric carcinoma were entered into a prospective chemotherapy protocol of continuous infusion 5-FU 1000mg/m<sup>2</sup> for 5 days plus 70-100 mg/m<sup>2</sup> cisplatin on day 2 given every 3 weeks. 15 were women with a median age of 66 years (range 45-75) and 25 were men with a median age of 67 years (range 32-82). 37 were Stage 3 inoperable disease or Stage 4. Metastases were found in: Liver -22; lung-6; omentum-3; RP lymph nodes-8; bone-2; ovary, colon, pancreas-1 each. 16 underwent previous subtotal gastrectomy; 7 received prior chemotherapy and 5 radiotherapy. Median number of courses was 3 (1-10). Overall response rate was 38% (8% CR and 30% PR). 2 of the complete responders received additional radiotherapy to the tumor bed. 15% had clinical response judged by improvement in symptoms, with stable disease. Median survival of all the patients from the beginning of the treatment was 7 months (range 1-19 months). Toxicity included: Nausea & vomiting Gr 2-3: 95%; weakness: 90%; mucositis Gr 2-3: 40%; nephrotoxicity (CCT < 50 ml/min): 12%; peripheral neuropathy: 12%; Grade 1 neutropenia: 23%. We conclude that our dose intensification regimen, given every 3 weeks, added toxicity without improving response.

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# DIAGNOSTIC WORK-UP (DW) IN STAGING AND EVALUATION OF RESPONSE IN HEPATOCELLULAR CARCINOMA (HCC) TREATED WITH CHEMOEMBOLIZATION (CE)

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The following is a multidisciplinary protocol integrating informations of DW in staging and evaluation of the response to CE in HCC is presented. The protocol includes US, Doppler-US, CT, angiography (AG) with Lipiodol (+/-anti-cancer drug), esofagogastroscoy as well as routine laboratory investigation, alfa-Fetprotein level and residual liver function with Antipyrine clearance; Lipiodol-CT (L-CT) is performed after one month or more after CE to differentiate L accumulation in the tumor and in non-neoplastic liver parenchyma. The protocol started in 01/92 and included 27 pts (22 males, 5 females; average age 64 y). In 16 pts (59%) US-CT-AG findings and L-CT findings showed concordant results regarding number and site of lesions, while in 11 pts (41%) discordant results were recorded. In this latter group the total number of lesions identified by US was 20, CT 18, AG 35 and L-CT 23. Thus the most sensitive procedure in identifying HCC nodules was AG. The advantage of AG was particularly evident in detecting smaller lesions (<1 cm). 7 nodules were depicted with AG otherwise not shown with US and CT. This preliminary report suggests how integrated interpretation of diagnostic findings leads to a more accurate definition of the extent of the disease, fundamental for therapeutic oriented decisions.