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THE VALUE OF CEA IN BILE OF PTS OPERATED FOR DIGESTIVE NEOPLASMS OR FOR BENIGN ABDOMINAL DISEASES

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SUMMARY: To evaluate and compare the value of seric and biliary CEA in benign diseases and digestive malignancies, particularly in pts operated for colorectal cancer. Preliminary results of the study are reported. We studied 150 consecutive pts admitted in our department for surgical abdominal procedures for different diseases. They had a seric and a biliary sample during the surgery. No complications deriving from the procedure occurred. In the 95 pts with colelithiasis the mean seric CEA value is 1.8 ng/ml, in bile 19.6 ng/ml. Nine pts with colonic cancer (Dukes B and C) had mean seric CEA value of 3.4 ng/ml and biliary CEA of 78.7 ng/ml. Eight pts with colonic cancer and hepatic metastasis presented a mean seric CEA value of 54.8 ng/ml and a mean biliary CEA value of 689 ng/ml. Four pts with abdominal not colonic carcinomas had a mean seric CEA value of 14.9 ng/ml and biliary value of the marker of 30.4 ng/ml. Six pts with benign diseases (Crohn's d., rectal prolapse, intestinal volvolus) had mean seric CEA value of 5.9 ng/ml and 14.4 in bile. One pt with a toxic megacolon presented an unexpected very high value of biliary CEA (2135 ng/ml).

KEY WORDS: CEA in bile in digestive neoplasms and benign abdominal diseases

CEA is considered the most important marker for the follow-up of pts "radically" operated for colorectal cancer. Its increase is often the first sign of a recurrence of the disease. Surgical CEA-directed second-look has been indicated from many authors as the only possibility to cure pts with a recurrence of a colorectal cancer but often the seric increase of the marker is late or sometimes doesn't occur, not allowing a procedure with good results. Many others tumoral markers have been studied but without a real practical benefit. CEA is present in bile in an unknown quantity in different pathologies and it should be very important to know, if it's possible and if it exists, its range of normality in this biological liquid. This knowledge could suggest, from a practical point of view, for pts "radically" operated for colorectal cancer, with normal value of seric CEA but high "pathological" value of this tumoral marker in bile, an early chemio or radiotherapy.

PATIENTS AND METHODS

We studied 150 consecutive pts admitted in our department for surgical abdominal procedures for different diseases. They had a seric and a biliary sample during the surgery.Ninety-five of them had a colelithiasis and the bile has been directly taken during the colecystectomy by emptying of the removed gallbladder. In 24 pts bile could'nt be sampled because of previous colecystectomy or possible damage deriving from the procedure. In the remaining 31 pts bile has been directly taken by puncture of the gallbladder using an insuline syringe during the laparotomies for the different pathologies. We excluded from the study pts with chronic liver diseases or with history or previous operations for cancer. No complications deriving from the procedure occurred. All samples have been spin-dried and immediately freezed at -30° up to the test carried out. CEA has been evaluated, in the serum in toto and in the prediluted bile by bovine albumine, by an immunometric method with a sandwich technique to a

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step using two monoclonal specific antibodies and the streptavidine-biotine link as pointing out system.

RESULTS

In the 95 pts with colelithiasis the mean seric CEA value is 1.8 ng/ml, in bile 19.6 ng/ml. All other pts have been divided in the following groups depending on the pathology.

1) nine pts with colonic cancer (Dukes B and C) and mean seric CEA value of 3.4 ng/ml and biliary CEA of 78.7 ng/ml. 2) eight pts with colonic cancer and hepatic metastasis presented a mean seric CEA value of 54.8 ng/ml and a mean biliary CEA value of 689 ng/ml. 3) four pts with abdominal not colonic carcinomas has a mean seric CEA value of 14.9 ng/ml and biliary value of the marker of 30.4 ng/ml. 4) six pts with benign diseases (Crohn's d., rectal prolapse, intestinal volvolus) had mean seric CEA value of 5.9 ng/ml and 14.4 in bile. One pt with a toxic megacolon presented an unexpected very high value of biliary CEA (2135 ng/ml).

DISCUSSION

Different types of diseases seem to have a comparable value of seric and biliary CEA, althogh a rational explanation for this is not possible up to date. The expected higher value of the biliary CEA compared with the seric one has been confirmed but we must study a greater number of pts to try establish a range of normality of the marker in bile because of the big difference of the values among the different pathologies. Particular diseases (IBD, toxic megacolon) can have an elevated biliary CEA value that up to date cannot have an explanation.

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