

Answer 1:

Bibliographic Information

Effects of interferon- α and 5-fluorouracil on recurrence and metastasis of hepatocellular carcinoma after tumor removal in nude mice. Pan, Ye; Zheng, Qi; Wang, Yu; Yan, Jun; Xue, Qiong. Department of Surgery, Shanghai Sixth People's Hospital, Shanghai Jiaotong University, Shanghai, Peop. Rep. China. Zhongliu (2007), 27(2), 104-108. Publisher: Shanghai Zhongliu Yanjiusuo, CODEN: ZHONEV ISSN: 1000-7431. Journal written in Chinese. CAN 148:553109 AN 2008:356126 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The effects of interferon- α and 5-fluorouracil on inhibiting metastasis and recurrence of hepatocellular carcinoma (HCC) after the tumor removal in nude mice were studied. Nude mice bearing orthotopic xenograft highly metastatic model HCC (LCI-D20) were randomly divided into 4 groups; they were control group (saline soln.), interferon treatment group (IFN- α 2b), 5-FU treatment group and combined treatment group (both 5-FU and IFN- α 2b). Drugs were given after tumor removal. Then, the size of recurrence tumor were measured and the presence of intrahepatic dissemination and lung metastasis was recorded, at the same time, MVD, VEGF, bFGF and SMA of the recurrence tumors and serum AFP were measured. The rates of tumor recurrence were 100%, 90%, 100% and 80% in control, interferon group, 5-FU group and combined treatment group, resp. Compared with control, the size of main recurrence lesion, the vol. of recurrence tumor significantly decreased in treatment groups compared with control ($P < 0.05$). Compared to 5-FU treatment group and interferon treatment group, the recurrence lesion decreased in combined treatment group ($P < 0.05$). Compared to the control, the no. of intrahepatic dissemination and lung metastatic ratio in IFN group and combined treatment group were reduced. A decreases of MVD, VEGF and SMA were obsd. in administration of interferon groups compared with that in unuse of interferon- α groups. Interferon- α is capable of inhibiting metastasis and recurrence of HCC after tumor removal in nude mice which exerts its effect by inhibiting tumor angiogenesis. There is a synergistic action between interferon- α and 5-FU in inhibiting the metastasis and recurrence of HCC in nude mice.

Answer 2:

Bibliographic Information

Effect of interferon- α -2b on the enhancement of tumor uptake of 99Tcm-labeled monoclonal antibodies. Li, J.; Duggaraju, R.; Maish, D. R.; Thakur, M. L. Department Radiology, Thomas Jefferson University Hospital, Philadelphia, PA, USA. Nuclear Medicine Communications (1996), 17(4), 346-52. Publisher: Chapman & Hall, CODEN: NMCODC ISSN: 0143-3636. Journal written in English. CAN 124:340513 AN 1996:276347 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The authors have previously shown that certain biol. response modifiers (BRMs) can significantly increase the tumor uptake of radiolabeled monoclonal antibodies (MAbs). Among the three different BRMs (Ukrain, Pokeweed mitogen and interferon) the authors evaluated, interferon gave the authors the best results. A series of expts. were conducted here to further elicit the influence of interferon on the enhancement of tumor uptake. Interferon- α -2b (IFN- α -2b) was used as a biol. response modifier, human melanoma xenografts grown in athymic nude mice as a tumor model, and anti-human melanoma specific ME31.3 as the MAb. The MAb was labeled with technetium-99m by a direct labeling method. IFN- α -2b was administered in different doses via i.v., i.m. or intratumoral routes. The results showed a significant increase in abs. tumor uptake of radiolabeled ME31.3 in all IFN- α -2b-treated groups. The max. increase (from 2.0% in the control group to 7.2% in the exptl. group) was obtained when 20K IU of IFN- α -2b were injected i.m.

Answer 3:

Bibliographic Information

In vivo effects of TSH, TSH-receptor antibodies, and interferon- α -2b in xenografted human thyroid carcinoma. Wenisch, H.

J. C.; Schumm-Draeger, P. M.; Encke, A. Dep. Surg., Johann Wolfgang Goethe-Univ., Frankfurt/Main, Germany. *Experimental and Clinical Endocrinology* (1992), 100(1-2), 48-50. CODEN: EXCEDS ISSN: 0232-7384. Journal written in English. CAN 118:226193 AN 1993:226193 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

In human thyroid carcinoma xenografts in athymic nude mice, application of pooled serum of patients with Graves disease or of interferon α 2b slightly decreased mean sizes of carcinoma transplants. TSH i.p. injection had little effect on carcinoma transplanted size as compared to controls.

Answer 4:

Bibliographic Information

Effect of human recombinant interferon-alpha on the activity of cis-diamminedichloroplatinum(II) in human non-small cell lung cancer xenografts. French R C; Bowman A; MacLeod K G; Ritchie A A; Cummings J; Smyth J F *Medical Oncology Unit Western General Hospital, Edinburgh, Scotland Cancer investigation* (1995), 13(6), 595-603. Journal code: 8307154. ISSN:0735-7907. Journal; Article; (JOURNAL ARTICLE) written in English. PubMed ID 7583709 AN 96076176 MEDLINE (Copyright (C) 2008 U.S. National Library of Medicine on SciFinder (R))

Abstract

Interferons (IFNs) augment the effect of some antitumor agents, including cis-diamminedichloroplatinum(II) (cDDP), in experimental systems. The effect of human recombinant interferon-alpha 2b (rIFN alpha) on the cDDP-dependent growth delay of a human non-small cell lung cancer established as a xenograft in nude mice (NX002) has been investigated. IFN (10(5) IU/mouse, s.c.) as a single agent had no effect on the growth of the xenograft. cDDP (4.2 mg/kg, i.p.) caused a specific growth delay of 0.42, and this delay was significantly enhanced (to 1.08) by concomitant dosing with the otherwise inactive IFN. Possible mechanisms for this supra-additive relationship between IFN and cDDP have been investigated: increased intratumoral accumulation of platinum was seen at late time points (maximally at 36 hr) during the pharmacokinetic beta-phase of cDDP elimination from the plasma of the nude mice. Tumor:plasma platinum concentration ratios at 36-48 hr indicated significantly increased accumulation of platinum in tumors from IFN-treated mice compared to controls ($p < 0.05$). Scheduling experiments suggest that this IFN-mediated effect can persist for 4 hr. These differences may account for the enhanced antitumor activity of cDDP when coadministered with IFN.