

Answer 1:

Bibliographic Information

Chemotherapy of subcutaneous and intracranial human medulloblastoma xenografts in athymic nude mice. Friedman, Henry S.; Schold, S. Clifford, Jr.; Bigner, Darell D. Med. Cent., Duke Univ., Durham, NC, USA. Cancer Research (1986), 46(1), 224-8. CODEN: CNREA8 ISSN: 0008-5472. Journal written in English. CAN 104:61637 AN 1986:61637 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The continuous human medulloblastoma cell line TE-671 was grown as s.c. and intracranial xenografts in athymic nude mice; tumor-bearing animals were treated with chemotherapeutic agents at the 10% LD. The xenografts were sensitive to melphalan [148-82-3], 1-(2-chloroethyl)-3-(2,6-dioxo-1-piperidyl)-1-nitrosourea [84930-24-5], and 5-azacytidine [320-67-2]. No consistent response could be demonstrated to 9- β -D-arabinofuranosyl-2-fluoroadenine 5'-monophosphate [75607-67-9], and no response to methylglyoxal bis(guanyl hydrazone) [459-86-9], N-trifluoroacetyl Adriamycin 14-valerate [56124-62-0], or to 1- β -D-arabinofuranosylcytosine [147-94-4] was obsd. Melphalan produced an increase in the median survival of mice bearing intracranial xenografts, whereas no response was seen to 1-(2-chloroethyl)-3-(2,6-dioxo-1-piperidyl)-1-nitrosourea or 5-azacytidine. This model will allow anal. of the chemotherapeutic profile of human medulloblastoma, and provides a means to differentiate cellular sensitivity and resistance from drug access to the intracranial site.

Answer 2:

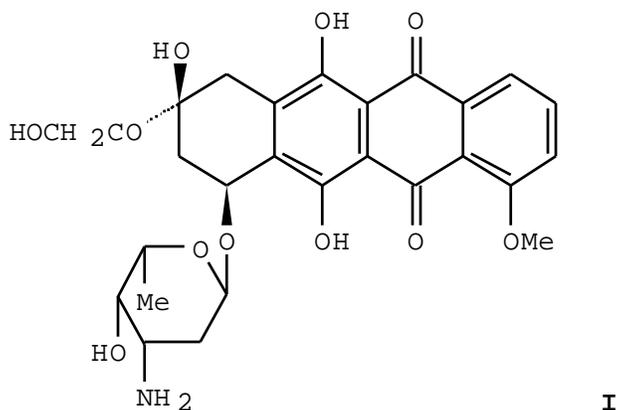
Bibliographic Information

Correlation of drug sensitivity on human colon adenocarcinoma cells grown in soft agar and in athymic mice. Zirvi, Karimullah A.; Masui, Hideo; Giuliani, Fernando C.; Kaplan, Nathan O. Cancer Cent., Univ. California, La Jolla, CA, USA. International Journal of Cancer (1983), 32(1), 45-51. CODEN: IJCNAA ISSN: 0020-7136. Journal written in English. CAN 99:133364 AN 1983:533364 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

A well-differentiated colorectal tumor T 219 which grows as a xenograft in athymic mice (human-tumor-nude-mouse system) and forms colonies in culture (soft agar colony-formation assay) was used to test the correlation between the above 2 methods of exposure of human tumor cells to antineoplastic agents. In vitro studies, 2 protocols were used: 1 h drug exposure and continuous drug exposure. In the 1 h drug exposure expts. 6 drugs, doxorubicin (I)(DX) [23214-92-8], 4'-deoxydoxorubicin (deoDX) [63521-85-7], 4'-epidoxorubicin (epiDX) [56420-45-2], 4'-O-methyl doxorubicin (O-DX) [77121-90-5], N-trifluoroacetyl doxorubicin-14-valerate (AD-32) [56124-62-0] and 5-fluorouracil (FUra) [51-21-8] were studied, while in continuous drug exposure expts. 4 of the above drugs (DX, deoDX, epiDX, O-DX) were studied. The survival of the tumor clonogenic cells (HC219) was detd. by counting the no. of colonies formed during 13-14 days of incubation and dose-response curves were obtained. In vivo studies, the mice were treated with all of the drugs used in in vitro 1 h drug exposure expts. (DX, deoDX, epiDX, O-DX, AD-32 and FUra). To quantitate the chemotherapeutic effectiveness of the drugs, T/C % (relative tumor vol. of treated group as percentage of the control group) values were calcd. each time the tumors were measured. Apparently, in vitro 1 h drug exposure results are in good agreement with the in vivo results, while the continuous drug exposure results do not agree with the in vivo data. The most active drug in in vivo studies, deoDX, was found to be the most active drug in the in vitro 1 h drug exposure expts. as well. However, in continuous drug exposure expts., O-DX, not deoDX, was found to be the most active drug. Activities of the other drugs tested also differed from their resp. activities in in vivo studies. Although the relative effectiveness of various drugs can be compared by detg. molar concns.

of the drugs producing 50% inhibition of colonies (ID50) the expression, predictive effectiveness index = LD10/ID50 \times 1000, which takes into consideration toxicity of the drugs, is probably a better indicator of the in vitro drug activity. The results suggest that soft agar colony-formation assay (with established cell lines from the same tumor) may be used for the prediction of in vivo activity of potential antineoplastic agents against human tumor xenografts in nude mice.



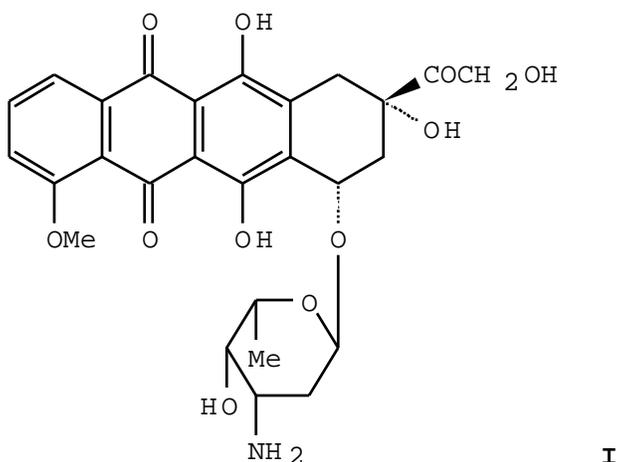
Answer 3:

Bibliographic Information

In vitro responses of nude mouse-xenografted human colon carcinomas exposed to doxorubicin derivatives in tissue culture and in the mouse. Zirvi, Karimullah A.; Van der Bosch, Juergen; Kaplan, Nathan O. Dep. Chem., Univ. California, La Jolla, CA, USA. *Cancer Research* (1982), 42(9), 3793-7. CODEN: CNREA8 ISSN: 0008-5472. Journal written in English. CAN 98:27415 AN 1983:27415 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

In vitro responses of 4 xenografted human colon tumors (T183, T219, T245, and T348) to various doses of 4'-deoxydoxorubicin (I) [63521-85-7] were investigated. The individual tumors showed marked differences in drug responsiveness, ranging from high sensitivity at low doses (T219; 125 ng/mL) to very low sensitivity at high doses (T245; 4000 ng/mL). The sensitivity ranking deduced from these in vitro expts. correlates well with the ranking deduced earlier from in vivo drug treatments of transplants of these tumors in the nude mouse. The effect of in vitro drug treatment (4'-deoxydoxorubicin; 250 ng/mL; 1-h incubation) on the in vivo growth of one of the tumors, T219, in nude mice was investigated. Growth of the tumor in nude mice was markedly delayed by pretreatments in vitro with 4'-deoxydoxorubicin. Furthermore, in vitro responsiveness of the T219 tumor was investigated following in vivo and in vitro treatment of the tumor with 4'-deoxydoxorubicin. Both of the pretreatments produced very similar decreases in drug responsiveness to all of the doxorubicin derivs. tested (4'-deoxydoxorubicin, , 4'-O-methyl-doxorubicin [77121-90-5], 4'-epidoxorubicin [56420-45-2], 4-demethoxydoxorubicin [64314-52-9], and N-trifluoroacetyl-doxorubicin-14-valerate [56124-62-0]).



Answer 4:

Bibliographic Information

Comparative antineoplastic activity of N-trifluoroacetyl adriamycin-14-valerate and doxorubicin against human tumors xenografted into athymic mice. Giuliani, Fernando C.; Zirvi, Karimullah A.; Kaplan, Nathan O.; Goldin, Abraham. Cancer Cent., Univ. California, La Jolla, CA, USA. Editor(s): Periti, Piero; Gialdroni Grassi, Giuliana. Curr. Chemother. Immunother., Proc. Int. Congr. Chemother., 12th (1982), Meeting Date 1981, 2 1435-6. Publisher: Am. Soc. Microbiol., Washington, D. C CODEN: 48HGAR Conference written in English. CAN 97:138243 AN 1982:538243 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

AD-32 (N-Trifluoroacetyl adriamycin-14-valerate)(I) [56124-62-0] exerted an antitumor effect against human tumors sensitive to doxorubicin [23214-92-8] transplanted in nude mice when it was administered at doses 10 times higher than those of doxorubicin. However, under these exptl. conditions, the antitumor activity of I against the human solid tumors was not superior to that of doxorubicin.

