

irradiation effects on rabbit hind legs and rat mandibular bones with clinical observations of irradiation effects on the human mandible. The main results of the study were as follows: 1) Bone marrow hemorrhage, eosinophilia and incipient oedema were encountered in the rabbit leg one day after a single irradiation dose. Edema and fibrosis were the salient features after five weeks, while both regenerative and fibrotic changes predominated eleven weeks after irradiation. The changes were the more extensive the greater the irradiation dose was. Empty lacunae as a sign of cell damage in cortical bone already appeared on the first day after irradiation; this effect reached its maximum when the dose was 20 Gy or more. 2) Bone marrow and subcutaneous tissue pO_2 and pCO_2 were measured by means of implanted Silastic tonometers in irradiated and non-irradiated rabbit hind legs. Single dose irradiation was followed by a rapid, dose dependent decrease of marrow pO_2 . The corresponding effect on pCO_2 was weaker and appeared later. The response to hyperoxia in the bone marrow became weaker when the irradiation dose increased. Less significant was the response of CO_2 tension to hyperoxia. O_2 and CO_2 tensions were recovered after single dose irradiation both in subcutaneous tissue and in bone marrow, but the reduction was less in bone marrow. During the twelve-week observation period clearly better recovery in tissue gas tensions was observed in subcutaneous tissue than in bone marrow. 3) Non-irradiated periosteal grafts on irradiated bone cavities in the rabbit tibia induced more rapid and intense mature bone formation than irradiated periosteal grafts. The irradiated periosteum, even after a single dose of 20 Gy, had some osteogenetic capaci-

ty. The alkaline phosphatase content was lowered eight weeks after surgery in irradiated legs but clearly exceeded control values twelve weeks after surgery indicating new bone formation. Lysosomal enzyme DAP II contents were increased in all irradiated specimens as a sign of disturbed bone formation. 4) The tissue concentrations of acid phosphatase, cytochrome oxidase, lactate dehydrogenase isocitrate dehydrogenase, glucose-6-phosphate dehydrogenase and succinate dehydrogenase in the immediate postirradiation period showed a greater increase in activity in the cut lines of the irradiated rat mandibles than in those of the non-irradiated mandibles. The activity increased with dose and time over the 24-hour observation period. 5) After irradiation of the healthy mandible, slight but significant elevations of uptake levels were detectable by computerized analysis of $^{99}Tc^m$ MDP scintigraphy. The scintigraphy may be used to predict whether osteoradionecrosis will develop in the irradiated mandible. 6) By morphometric methods a decrease in the number of trabeculae and a relative increase in the amount of marrow space were shown to occur during radiation therapy. The changes were reversible, which signifies the recovery of bone after irradiation at therapeutic doses. 7) The clinical trials with tibial periosteal grafting combined with surgical eradication of the focus and auxiliary hyperbaric oxygenation and antimicrobial therapy in mandibular osteoradionecrosis and osteomyelitis showed clinical recovery, which was promising enough with a view to extended use of the method in the management of these severe diseases.

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The European Association for Cancer Education

At the 14th International Cancer Congress (Budapest, October 1986) it was decided to establish the European Association for Cancer Education. The official foundation of EACE took place on 28 January 1987.

The members of the Executive Council are G. S. Ingimarsson (President, Reykjavik), W. Bender (Secretary, Groningen), J. Einhorn (Stockholm), E. M. L. Haagedoorn (Groningen), R. M. Harden (Dundee) and C. D. Sherman (New York).

The EACE wants to be a forum for members to exchange ideas and materials concerning cancer education, including educational research. The aim is to bring together people from different professional groups or disciplines who in different ways are in-

involved in the educational aspects of cancer. One tool to reach this goal will be the Annual Meeting which will be held in alternating countries throughout Europe.

In fighting cancer, education is one of the keys. If you are interested in the EACE, please write to the Secretary; he will be happy to keep you informed on ongoing activities.

Members of the European Association for Cancer Education receive the Journal of Cancer Education for half the price as part of their dues. The membership fee is 55 ECU (the Journal of Cancer Education included). Institutions may subscribe to a collective membership; in that case the fee can be reduced as decided upon by the Executive Council.

Further information may be obtained from the Secretary of the EACE, Dr W. Bender, Centre of Medical Education Research and Development, Bloemensingel 1, 9713 BZ Groningen, The Netherlands.