29. Enhancement Tumor Immunity-Modification of Autochthonous Antigen with Mercaptounadecahydroduodecaborate

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The possibility of tumor-specific antigens has been recognized by many people by now. But many trials of application of such antigens to therapeutic purpose have so far failed probably owing to very low antigenicity of the antigen itself. Hatanaka invented the preparation of tumor antigens modified with one of the boron-sulphydryl alkylating agents, $\text{Na}_2\text{B}_{12}\text{H}_{11}\text{SH}$, which forms a strong bond with tumor proteins, to enhance the antigenicity of the tumor antigens.

The material was an isogenic brain tumor originally induced by methyl-cholanthrene and transplanted subcutaneously into C3H/HeJ mice. The mice that had received the vaccine that had been made by incubating the tumor homogenate with an isotonic solution of the compound demonstrated a marked tumor growth retardation in comparison to the non-treated group of mice. And further, the vaccine showed a statistically significant tumor growth suppression even when it was given after the tumor was transplanted.

It was clarified that this tumor-suppressive effect did not owe to some anti-tumor action of the compound, by a fact that the administration of the compound alone had not suppressed the tumor growth and by an antigen-clearance test.

30. Hyperbaric Oxygen Therapy as a Postoperative Management in Neurosurgery

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Recently, it is reported that hyperbaric oxygen therapy has a possible value in some diseases in which hypoxia is present. However, it has not been clarified whether this therapy is effective for the unconsciousness in the postoperative course of neurosurgery.