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The Liquefaction (Oncolysis) of Malignant Gliomas by a Non Pathogenic Clostridium*

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With 2 Figures

Summary

Vascular glioblastomas become liquefied when contaminated with spores of the non-pathogenic Clostridium butyricum M 55. The spores are administered by intracarotid injection. The oncolysis is complete one week after injection. The glioblastoma is converted into a brain abscess which is then operated on appropriately. Forty nine patients have been treated in this manner. The rate of recurrence, however, remained uninfluenced.

Almost twenty years have passed since we (M.) made the discovery that liquefaction of malignant tissue (oncolysis) will occur if contaminated with spores of the non-pathogenic Clostridium butyricum M 55. Only in this environment can these spores germinate into mature rods (Fig. 1). In animal experiments this could regularly be demonstrated.

We have attempted to utilize the knowledge of this behaviour in the control of malignant cerebral tumours in the following manner:

In patients, who after a carotid angiogram were suspected of suffering from a highly vascular malignant glioblastoma, the carotid artery on the ipsilateral side of the tumour was punctured. A suspension of 10^9 lyophilized and dried spores of the stem M 55 in aqua destillata was then slowly injected. On the following day 2 ml of Myofer was given intravenously, as the addition of heavy metals had promoted germination in bacterial cultures.

Between three and four days later the body temperature of the patient startet to rise and leucocytosis developed. Towards the end of the first week the patient was drowsy. An increase of focal signs and mounting intracranial pressure would at this stage make operation imperative. If reaction to the M 55 spores was absent or weak

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the whole procedure was repeated, operation taking place at the end of the second week.

In the last four patients the injection of M 55 spores was preceded by the injection of 400,000 units of Trasylol into the carotid artery in an attempt to dilate marginal tumour vessels through the kinin-inhibitory effect of this preparation.

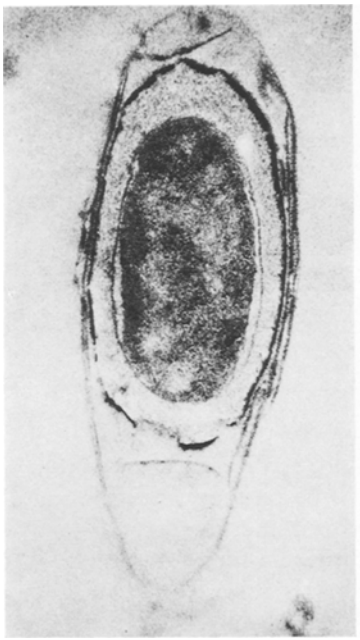

Fig. 1

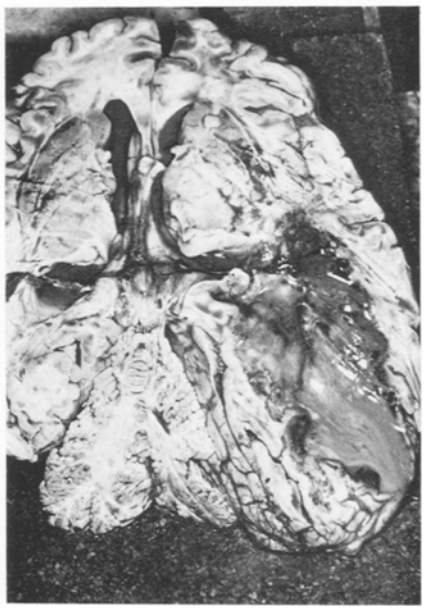

Fig. 2

Fig. 1. Clostridium butyricum M 55 in oncolytic brain abscess. Electron microphotograph (Institute of Pathology, University of Graz)

Fig. 2. Liquefaction of Glioblastoma multiforme following intracarotid injection of Clostridium butyricum M 55. Rupturing of the abscess into the lateral ventricle caused death

Between the years 1964 and 1973 49 patients were treated in this manner.

The results were always the same. The glioblastoma became a putrid abcess (Fig. 2). In the 16 patients who died during treatment with M 55 the post-mortem confirmed this.

Of special interest is case No. 5, a 36-year-old man, who received treatment with M 55 spores for a presumed central glioblastoma.

Reacting violently to the spores the patient died. The post mortem revealed the tumour not to be a glioblastoma but a cerebral metastasis. This metastasis was liquefied in the usual way, but equally liquefied were the bean-sized primary tumour in the head of the pancreas and a further walnut-sized metastasis in the liver.

This method of treatment does unfortunately not solve the glioblastoma problem, as operation must always intervene before total oncolysis is completed.

The high rate of recurrence is not influenced. Nevertheless enough general new aspects of tumour biology and bacterial combat of tumours have been revealed to warrant a report.

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