PARTIAL REMISSION OF ADVANCED ADENOID CYSTIC CARCINOMA OBTAINED WITH ADRIAMYCIN
A Case Report with a Review of the Literature

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Adenoid cystic carcinoma is relatively uncommon and often originates from the salivary glands. Although distant metastases develop rather frequently no satisfactory form of therapy has been reported. We achieved a partial remission with adriamycin in a patient with advanced metastases of adenoid cystic carcinoma. This case is described, and a short review of the literature, including papers on the treatment of advanced disease, is also given.


Adenoid cystic carcinoma (ACC) is a slow growing tumor with relatively low frequency.²⁻⁴⁻¹⁵ Because most of the reports in the literature concern a specific organ or region, overall figures indicating the frequency of the tumor are not available. Adenoid cystic carcinomas usually originate from the major and minor salivary glands (about 20% of all malignant tumors of the salivary glands are adenoid cystic carcinomas¹¹⁻¹³⁻¹⁵) and less frequently from lacrimal glands, ceruminous glands of the external auditory canal and mucinous glands of the upper respiratory and digestive tract. Localization of the primary tumor in the skin, breast and cervix has been described but in view of their divergent clinicopathological characteristics, these are probably different entities.

The most prominent clinicopathological features of the salivary gland type of adenoid cystic carcinoma are slow growth, frequently invasive tumor infiltration into surrounding soft tissues (perivascular and perineural) and bone, a very high local recurrence rate after surgical removal of the primary tumor, and lastly, late onset of regional lymphnode and distant metastases.

Adenoid cystic carcinoma appears most frequently between the ages of 30 and 60, with a peak in the 40–60 year age group and shows a slight prediliction for the female sex.

Regional lymph node metastases develop in 20 to 30% of all patients with adenoid cystic carcinoma, distant metastases in about 40%. The latter are localized mainly in the lungs, but also in the bones, the brain, the liver and the visceral organs. There is often a very long interval between the establishment of the primary tumor and the appearance of distant metastases.

The primary treatment for adenoid cystic carcinoma is radical local excision, with or without radical neck dissection if cervical lymphnode metastases are present. Nevertheless, the local tumor recurrence rate is very high.⁵⁻⁶⁻¹¹⁻¹³⁻¹⁴⁻¹⁵

Radiotherapy is reported to have palliative value (temporary tumor regression and subjective improvement) in cases where (radical) surgical removal is impossible or after local recurrence.⁴⁻⁶⁻⁸⁻¹⁵ So far, treatment with cytostatic agents has been very unsatisfactory in cases of distant metastases of adenoid carcinoma. The present report concerns a case of adenoid cystic carcinoma with distant metastases that responded to adriamycin therapy.

CASE REPORT

In October 1971, a 60-year-old female patient was referred to the Department of Otolaryngology of the Utrecht University Hospital, because of a swelling in the left side of the soft palate. A definitive diagnosis was not made on clinical grounds, but the possibility of a malignant tumor was considered.

After surgical removal of the tumor, histological investigation revealed an infiltratively growing adenoid cystic carcinoma of the soft palate. The patient received no adjunctive postoperative radia-
tion therapy. Periodic follow-up showed no local recurrence or metastases. In March 1976 the patient complained of a nonproductive cough. Physical examination was negative. The hematological and biochemical findings were normal. X-ray studies of the chest demonstrated many circular metastases of varying size (see Fig. 1A). Although the metastases have not been proved to be from the adenoid cystic carcinoma. This was most probable in this case.

The patient was then referred to the Oncology Unit of the Department of Internal Medicine, where therapy with 5-fluorouracil was instituted. After 5 weeks of treatment and a total dose of 3,750 mg 5-fluorouracil, a chest x-ray showed growth of the metastases and the therapy with this agent was discontinued. In May 1976, therapy with adriamycin was started at a dose of 50 mg/m² every three weeks. By October a partial remission of the lung metastases had taken place (see Fig. 1B). Because a cumulative dose of 550 mg adriamycin/m² had been reached, this drug was discontinued in November although at that time no side effects except alopecia and mild bone marrow depression were present.

Thereafter, therapy with 1-(2-chloorethyl)-3-cyclohexyl-1-nitrosourea (CCNU) in a dose of 170 mg/m² was started, but the metastatic process soon became progressive again. At this moment the patient has numerous lung metastases, but feels rather well without any form of therapy.

**DISCUSSION**

Although adenoid cystic carcinoma is a relatively uncommon neoplastic process distant metastases appear usually after a long interval, in a great many of the patients. Judging from the literature, the treatment of metastasizing adenoid cystic carcinoma has been very unsatisfactory even though a large number of cytostatic agents have been tried, including cyclophosphamide, 5-fluorouracil, ethylhydrazide podophilic acid, Vercyte, Tilorone, methotrexate, cytosine arabinoside, BCNU, Velbe and Streptozotocin.

Evaluation of the results of chemotherapy is often difficult, because the series of patients treated with one of these agents are always very small and are often not restricted to patients with the particular type of tumor. Only cyclophosphamide which was applied in combination with radiotherapy in a series of 6 patients, gave temporary arrest of tumor growth; the other drugs mentioned above had no favorable influence on tumor growth. The 5-year survival of untreated patients with lung metastases of adenoid cystic carcinoma has been estimated at only 20%, whereas one-third of the untreated patients with distant metastases died within a year.

To the best of our knowledge, our patient with advanced metastases of adenoid cystic carcinoma is the first case to be reported with a partial remission achieved with adriamycin, an agent which has been successfully used

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**Fig. 1A.** Chest x-ray before treatment with adriamycin: many circular lung metastases of varying size.

**Fig. 1B.** Chest x-ray after treatment with adriamycin: partial remission.
alone or in combination with other drugs in many other types of tumor.

It may be expected that, because of the limited results of primary surgical therapy—in view of the high local recurrence rate and the development of regional lymph node metastases—an increasing number of patients with distant metastases will be seen. On this basis a multi-center phase II trial of cytostatic agents and, in particular, adriamycin in the treatment of this uncommon tumor is to be considered.

REFERENCES


