Intravenous Ascorbate Treatment of Breast Cancer: A Case Report

Bernhard G. Welker, MD[1]

[1] Gynecologist, Outpatient clinic, Koenigstrasse 29, 53115 Bonn, Germany, Tel: 0049-228-265410
Fax: 0049-228-222515, email: welker-bonn@t-online.de

Abstract *Intravenous ascorbate (IVA) therapy was applied to a patient with breast cancer in November 2010. Continuous tumour regression was observed over the course of 8 months. Neither surgery nor chemotherapy was performed. For this patient, IVA therapy was successful, safe, and without side effects. Unexpectedly, the patient died in July 2011 of gastrointestinal haemorrhage. No autopsy was performed. IVA therapy of breast cancer should be studied further, as it might be an effective treatment.*

Case Report

A 73-year-old woman underwent diagnostic procedures in January 2010. Clinically, a solid mass of 4 cm in diameter was found between the outer upper and outer lower quadrant of her right breast with inflammation of the skin and a lymph node of 2 cm in diameter in the right armpit. Vacuum biopsy revealed an inflammatory ductal carcinoma which was classified as follows by the Department of Pathology, University of Bonn: grading G2, oestrogen receptors positive (100%), progestogen receptors positive (50%), HER2+ negative (0).

Radiography confirmed metastatic lymph nodes in the right axilla of 2 cm in diameter. No other metastases were detected by means of skeleton-scintigraphy, magnetic resonance tomography, radiography, positron emission tomography-computed tomography, and ultrasound. The size of the subcutaneous carcinoma was at least 4 x 5 cm as revealed by mammography.

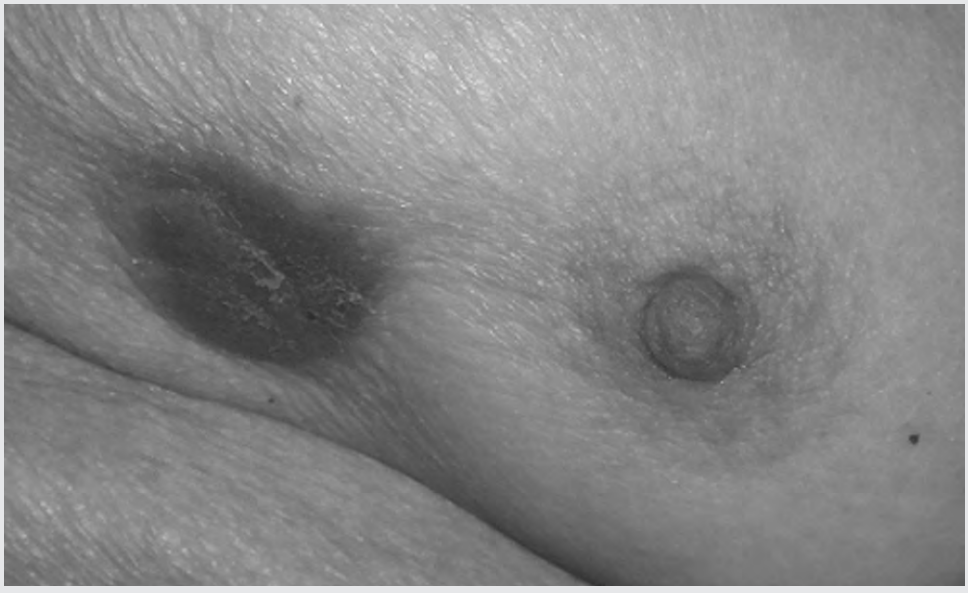
Further diagnoses were atrial fibrillation, insufficiency of the tricuspid valve, insufficiency and stenosis of the mitral valve, arterial hypertension, arteriosclerosis, elevated liver enzymes, and diabetes mellitus type II. She was treated with daily verapamil (240 mg), olmesartanmedoxomil (30 mg), hydrochlorothiazide (25 mg), furosemide (60 mg), pantoprazol (20 mg), iodine (100 µg), metoprolol succinate (95 mg), and phenprocoumone, a systemic anticoagulant drug, since 2006.

After all diagnostic procedures were finished the patient refused any therapy of the breast cancer. Ten months later, in November 2010, she was seen for the first time at my office. She was also taking tamoxifen at a dose of 20 mg per day, but neither chemotherapy nor radiotherapy was performed.

Despite not taking all of her medications daily, she assured us that she was compliant with phenprocoumone. Her international normalization ratio (INR) result was in the therapeutic range. Symptoms observed were oedema of the legs, nausea, vertigo, and epistaxis. The size of the tumour in the breast was 4-5 cm, accompanied with inflammation of her skin, which measured 4 cm in diameter, and had serous secretion out of its centre where the biopsy was taken (**Figure 1,** p. 176).

She requested intravenous ascorbate (IVA) therapy and opted not to pursue chemotherapy or surgical treatment of her

Figure 1. Photograph of the right breast at the beginning of intravenous ascorbate therapy



breast cancer. Abram Hoffer´s daily regimen for cancer was offered[1], but she was unwilling to follow it because she was on so many medications. She was also unwilling to abstain from sugar intake. IVA therapy was initiated and was the only treatment she agreed to. She was administered two infusions of IVA per week, and would have only one or no infusions during holidays. Each IVA treatment contained 15 grams of ascorbate, and lasted approximately one hour. This dosage corresponded to 0.19 grams of ascorbate per kilogram body weight (79 kg). No side effects were observed and INR monitoring remained stable. Her previously elevated liver enzymes decreased slightly and her blood pressures remained unchanged.

After three months the metastatic lymph node was not palpable anymore and could not be visualized by ultrasound. The inflammation of the skin measured 3 x 2.5 cm and the rims of the tumour in the breast were not sharp-edged anymore.

Six months after the beginning of IVA treatment the inflammation of the skin almost disappeared (**Figure 2**, opposite). The tumour was 2.5 cm in diameter as measured by mammography. No enlarged regional lymph nodes were found. The patient always felt well. No other metastases were identified by radiography and ultrasound.

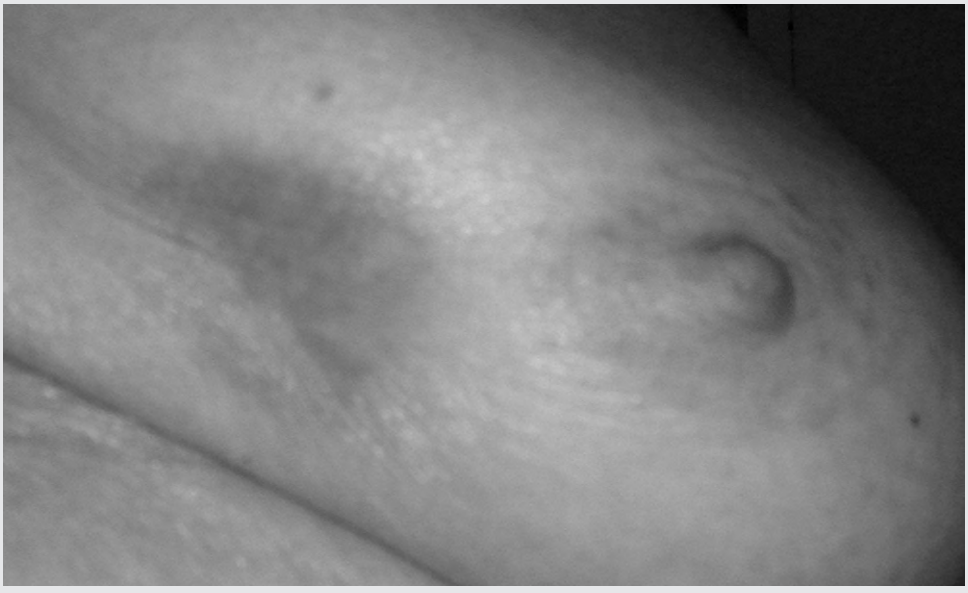
The serum level of the tumour marker, CA 15-3, was normal in June 2011; it had not been measured earlier. Over the course of IVA therapy, INR values ranged from 1.7 to 2.6, systolic blood pressures ranged from 130 to 170 mmHg, and diastolic blood pressures ranged from 80 to 110 mmHg. Testing of her lipids, ferritin, iron, selenium, and zinc were normal.

Unexpectedly, the patient died in July 2011 of gastrointestinal haemorrhage. No autopsy was performed.

Discussion

This report suggests resolution of a lymph node metastasis and regression of primary breast cancer from infusions of 15 grams IVA therapy over the course of eight months. No other specific therapy or dietary

Figure 2. Photograph of right breast after six months of intravenous ascorbate therapy



interventions were used during this period of time. No side effects were observed and the patient did not suffer.

IVA therapy did not significantly alter the patient's daily dose of phenprocoumone (or her INR), suggesting that it might be safe to apply both simultaneously. Theoretically, nephrolithiasis could occur. However, when attempting to combat cancer it might be reasonable to accept the risk of kidney stones if IVA therapy helps. Patients with histories of renal insufficiency, renal failure, systemic iron overload, glucose-6-phosphate dehydrogenase deficiency, or who are actively undergoing dialysis, should be excluded from receiving this therapy.

Spontaneous regression is often touted by individuals to dismiss the putative merits of IVA therapy. Spontaneous regression means "the partial or complete disappearance of a malignant tumour in the absence of all treatment, or in the presence of therapy which is considered inadequate to exert significant influence on neoplastic disease."[2] This assumption cannot be applied to the present case.

It is evident that the results obtained with ascorbate[3-6] in cancer treatment over the past decades are reproducible, even when the protocol is not well established, and even if chemotherapy shortly before or simultaneously with IVA might influence the efficacy of ascorbate.[7] In cases where chemotherapy has not been shown to benefit a specific cancer, or when a patient refuses such treatment, it might make sense to use IVA therapy.

Riordan et al[8] elucidated that ascorbate selectively destroys cancer, but not normal cells by generating hydrogen peroxide. Chen et al[9] confirmed that tumour cell destruction is mediated by extracellular ascorbate at pharmacologic concentrations achievable through intravenous administration. It was concluded that ascorbate may serve as a pro-drug for hydrogen peroxide delivery to extravascular tissues, with the blood serving as the delivery system of the pro-drug to the tissues. There is even speculation that special preparations of oral ascorbate might achieve concentrations sufficient enough for it to function as a pro-drug.[10]

More reports have been published on IVA therapy for advanced cancers than of primary neoplastic diseases. Hopefully, this report contributes to an emerging body of literature supporting IVA therapy for primary neoplastic diseases. Evidence ("clinical plausibility"[5]) is conceded if case reports are based on well-documented reporting according to the US National Cancer Institute (NCI) Best Case Series guidelines (www.cancer.gov/cam/bestcase_intro.html).[11,12] This case meets the NCI Best Case Series Criteria since there was a definitive diagnosis of cancer, documentation of disease response, absence of confounders, and documentation of treatment history.

In summary, IVA therapy of breast cancer should be studied further, as it might be an effective primary treatment. Also, it could be considered as a strategy to prevent both metastases and cancer recurrences following primary cancer treatment.

Statement of Informed Consent

Written consent was obtained from this patient (prior to her death) for publication of this report, including the photographs.

Competing Interests

The author declares that he has no competing interests.

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