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LETTER TO EDITOR

Proposed Biology of the Spontaneous Remission of Merkel Cell Carcinoma after Biopsy

Behzad Niakan*

Pharm. D, USA

***Corresponding author:** *Behzad Niakan, Pharm. D., P.O. Box 25817, Los Angeles, Ca. 90025, USA, Tel: (310) 925-2720*

Introduction

The medical literature has many case reports of the spontaneous remission of Merkel cell carcinoma after biopsy [1-10]. It is noteworthy that prior to the biopsy the Merkel Cell Carcinoma was growing rapidly. It is suggested that the biopsy has possibly resulted in the breakage of a vessel and blood loss within the malignant tissue. Therefore, low iron level in a segment of the malignant growth. Merkel cell carcinoma often appears as a single pink, red, or purple shiny bump on the skin and is fast growing. Spontaneous remission of many different types of cancer has been reported after biopsy. It seems the spontaneous remissions of cancer after biopsy occur more commonly after the biopsy of Merkel cell carcinoma.

It is suggested that Spontaneous remission of Merkel cell carcinoma or any other cancer [10] may occur when two conditions are met. A low blood oxygen (low iron, etc.) and a rapid or steady malignant growth. Low blood oxygen or severe low iron may result in respiratory alkalosis. Alkalosis can result in a rise of extracellular PH. A rise in extracellular PH can result in a drop in intracellular PH. Acute respiratory alkalosis can result in a transient drop of the intracellular PH. A drop in intracellular PH can inactivate the enzyme lactate dehydrogenase A. lactate dehydrogenase A is an important metabolic enzyme for cancer cells. Also, a low blood iron level can be followed by a lower level of intracellular iron in cancer cells. A low intracellular iron results in a drop in the intracellular PH (Phi). A drop in intracellular PH can further inhibits the enzyme lactate dehydrogenase awhich is essential for the metabolism of cancer cells. Since cancer cells have a higher dependency on iron, they are affected earlier by a lower intracellular Phi due to low blood iron.

A steady and rapid malignant growth has a high need for the enzyme lactate dehydrogenase A for its metabolism. As the intracellular PH drop so does the inactivation of enzyme lactate dehydrogenase A. if the need for lactate dehydrogenase Aoutpaces the available lactate dehydrogenase enzyme possibly a section of a tumor may become hypoxic. If the need for lactate dehydrogenase A severely outpaces what is available possibly the whole tumor or an unusually large section of the tumormay become hypoxic and possibly followed by an immune removal of the malignancy and the remission cancer.

The implication of the hypotheses is that if a malignant tumor grows rapidly and faced with the inhibition of the lactate dehydrogenase A then a remission of cancer possibly may occur. In other words, a combination of

(a) a low transient intracellular PH due to an acute alkalosis

(b) low blood iron level

(c) rapid tumor growth

may possibly be followed with a remission of cancer. Aggressively growing tumor or very vascularized tumors may respond better. A tumor can't be all hypoxic or all oxygenated. It seems a tumor holds a balance between the oxygenated and hypoxic area which maybe disrupted if a tumor continues to grow rapidly or steadily and faced with the inhibition of the enzyme lactate dehydrogenase A.

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High dose of bicarbonate can cause a transient drop in intracellular Ph. If simultaneously during the transient low intracellular PH a low blood iron level is present and accompanied with a push for a rapid malignant growth such as a high dose of glucose, then a remission may follow. If the tumor is hormone sensitive such as prostate cancer. Testosterone may be added to the glucose administration. Iron chelators might be used to the extent that a significant slowdown of the malignant growth occurs(low blood iron level).

If a malignant tumor is covered by its membrane whether spread or not. A low blood iron level can drop the intracellular PH (PHi). Furthermore, also injecting bicarbonate inside the membrane may further lower the intracellular PH (PHi) to inactivate the lactate dehydrogenase. After wards administering glucose to induce rapid growth. Due to lack of lactate dehydrogenase enzyme A it may be followed by the breakdown of the tumor and followed by a generalized apotheosis and the development of immunity and a remission of cancer. This procedure might be the simple to test the suggested hypotheses since more than once can carbonate be injected inside the membrane due to the low dose and less likely to cause metabolic alkalosis MRI imaging can detect if a membrane is present.

Removal of a section of a malignant growth maybe followed with compensatory tumor growth. Removal of a section of a malignant may done with surgery or a low dose of radiation for a short period. Prior to inducing compensatory tumor growth iron chelators might be used to lower blood iron level and followed by a high dose of bicarbonate.

Spontaneous remission of cancer may occur when iron is severely low which may not be suitable to reproduced in cancer patients due to the potential danger to patients. Yet, low iron level may be complemented by a drug that inhibit lactate dehydrogenase A enzyme such as Quinoline 3-Sulfonamides. The combination might significantly suppress the enzyme lactate dehydrogenase A.

Inducing a malignant growth to grow while it is inhibited from growth can result in tumor progression or apotheosis. Since, lactate dehydrogenase A enzyme is an important metabolic enzyme of cancer growth its suppression would more likely induce apotheosis.

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