How Is Methotrexate Used, and in What Circumstances?

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This year, I received from patient Marcie a letter from the Italian Institute of Radiology that "we have concluded that methotrexate should no longer be administered to prostate cancer patients in Italy.†Although it had been promoted to treat men with advanced prostate cancer, methotrexate has shown poor efficacy. The news came as a surprise since the active ingredient in methotrexate is an anthracycline. I also received letters from men in my practice who recently or had previously received treatments with methotrexate. One wrote about his treatment of metastatic testicular cancer, another wrote about treatment of adenocarcinoma of the mouth.

Now, I have been teaching for forty years. There were several years when I made use of a combination of chemotherapy and immunotherapy called variable therapy and post-chemotherapy therapy. The first step in this was chemotherapy and then post-chemotherapy therapy to eliminate as much of the cancer as possible. It was effective but more than that the combination permitted rapid healing of the prostate after the chemo, which sometimes took 4 weeks to cure.

The unfortunate thing was that methotrexate was used along with the chemotherapy and the effect was cancelled in the metabolism of methotrexate, which could be worrisome in metastatic tumors. After the metastatic treatments, the prostate could not produce the protein known as CD33 that normally is expressed on tumor cells, possibly because of methotrexate. When in metastatic tumors, testosterone is also suppressed, the expression of CD33 can be very high. The lack of the protein reduces the supply of needed amino acids to make the prostate healthy. The result may be the demise of the prostate. We are hoping to be able to administer higher doses of chemotherapy and/or chemotherapy plus radiation in order to get to the root cause of cancer and avoid the lost production of the protein. The reason methotrexate may be inappropriate for metastatic cancer is that the biological principle that makes the prostate healthy may not be functional in the tumor setting.

Methotrexate has been used to treat osteoporosis. A recent review shows that it might also be useful in the treatment of bladder cancer. A woman in Italy was treated for metastatic bladder cancer after the cancer metastasized to her spine in her lower extremities. After a surgery and chemotherapy treatment, the study showed that a tumor failure ratio improved to 1.93 from 2.56. Even before the surgery, the presence of tumor cells in her bladder blood samples had decreased. A patient in Italy was treated for metastatic bladder cancer and, after a surgery and chemotherapy treatment, the study showed that the tumor failure ratio improved to 1.93 from 2.56. Even before the surgery, the presence of tumor cells in her bladder blood samples had decreased. An additional medication, pegamet-pyridostigmine bromide (PB2), may have contributed to the improved survival of the patient.

The patient in Italy also reported that his last breath showed the effect of PB2 before the cancer progressed, although he had stopped taking PB2 after three months following the surgery. That, and some bone disease, had been causing the patient pain. The drug has had good clinical results.

The positive part of all of this is that researchers are finding indications that a balance between chronic and metastatic cancers are essential for the survival of all cancer patients, regardless of type. Clinical trials are showing that chemotherapies can be combined with and prevent metastatic cancer. The three most common cancers in western societies $\hat{a} \in \text{``}$ skin, lung, and breast cancer $\hat{a} \in \text{``}$ have almost identical rates of metastasis. Medical teaching and research should continue to support such research, although there are enormous financial restraints in the current financial crisis.

The metastatic bladder cancer patient was declared cancer free five years after treatment. That patient lived happily for another 2.5 years. She continues to receive treatment from Dr. Angelo Dal Vello.

Unfortunately, her cancer had spread to her spine and lungs by then, so that she had to have her spine removed in addition to a brain surgery and chemotherapy.



A Bird Sitting On Top Of A Wooden Fence