



THYROID CANCER

Sorafenib may offer benefits as a second-line treatment of metastatic medullary thyroid cancer

BACKGROUND

Medullary thyroid cancer (MTC) is a relatively rare type of thyroid cancer that can run in families. Most patients with MTC are cured after surgery, but about 15% can have metastatic spread of MTC to distant organs such as the bone, liver, and lung. Unlike other types of thyroid cancer, MTC does not respond to radioactive iodine therapy. If the cancer can no longer be removed by surgery, some patients will be offered chemotherapy for metastatic MTC. There are 2 drugs, Vandetanib and Cabozantinib, approved for the treatment of metastatic MTC. These drugs work by blocking the stimulators of growth of the cancer and are called targeted kinase inhibitors (TKI). The drugs are taken by mouth each day.

Some MTC patients do not respond to the current TKI options and therefore, there is a need to find more treatments for this group of patients. This study from a hospital in Brazil tested a drug called Sorafenib also a TKI (already approved for treating metastatic papillary thyroid cancer) for its ability to stop the growth of metastatic MTC. They also looked at side effects of the medication.

THE FULL ARTICLE TITLE

de Castroneves LA et al Sorafenib for the Treatment of progressive metastatic medullary thyroid cancer: efficacy and safety analysis. *Thyroid* 2016;26:414-9. Epub February 9, 2016.

SUMMARY OF THE STUDY

This study included 12 adults (7 men and 5 women)

who were treated with Sorafenib (400mg twice a day). Most of the patients were followed for just over a year. The patient's tumors were assessed using the standard scoring system known as RECIST criteria. A total of 10 of the patients did not have growth of their cancer for almost 12 months and 9 patients did not have growth of the cancer for 6 months or more after starting Sorafenib. Only 2 patients had growth of their cancer and 3 patients overall died within 3 months of starting Sorafenib. The MTC marker calcitonin did decrease in 92% of patients after starting Sorafenib. The majority (9 patients) had side effects to the drug and had to lower the dose of medication but were able to continue the drug. The most common side effects were skin rashes, weight loss and fatigue).

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study showed that Sorafenib can decrease the growth of metastatic MTC. However, we have to look at this in perspective because it included a small number of patients. In addition, the majority of patients (75%) had side effects from the medication which often can limit its use. More studies of sorafenib for metastatic MTC will need to be done to assess its ability to treat metastatic MTC.

—Wendy Sacks, MD

ATA THYROID BROCHURE LINKS

Thyroid Cancer: <http://www.thyroid.org/thyroid-cancer/>

ABBREVIATIONS & DEFINITIONS

Medullary thyroid cancer: a relatively rare type of thyroid cancer that often runs in families. Medullary cancer arises from the C-cells in the thyroid.

Cancer metastasis: spread of the cancer from the initial organ where it developed to other organs, such as the lungs and bone.

Papillary thyroid cancer: the most common type of thyroid cancer. There are 3 variants of papillary thyroid cancer: classic, follicular and tall-cell.

RECIST: Response Evaluation Criteria in Solid Tumors — this is a set of published rules that define when cancer patients improve (“respond”), stay the same (“stable”) or worsen (“progression”) during treatments.



THYROID CANCER, continued

Sorafenib: an anticancer drug that has been shown to be effective in thyroid cancer.

Tyrosine kinases: proteins that are overactive in many of the pathways that cause cells to be cancerous.

Tyrosine kinase inhibitors: chemotherapy drugs that inhibit tyrosine kinases and slow the growth of certain metastatic cancers

Calcitonin: a hormone that is secreted by cells in the thyroid (C-cells) that has a minor effect on blood calcium levels. Calcitonin levels are increased in patients with medullary thyroid cancer and serve as a marker for this type of thyroid cancer.

