

Treating refractory Thyroid Cancer in the era of multitarget Tyrosine Kinase Inhibitors

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TKIs have been used in treating patients with refractory and progressive thyroid cancer.

Aim: To assess the efficacy of these agents thyroid cancer regarding quality of life, adverse effects and response rates.

Patients and Methods: We retrospectively analyzed data of 16 adult patients (9 males and 7 females), with differentiated and medullary thyroid cancer (10 DTC and 6 MTC) treated with either sorafenib or sunitinib from April 2009 to October 2011. The median duration of treatment for all patients was 4 circles (range 0.5-16).

Results: The median duration of treatment for all patients was 4 circles (range 0.5-16). 14 out of 16 (87.5%) patients discontinued treatment due to high grade toxicities and patient's unwillingness to continue. Two patients experienced grade 4 serious-life threatening adverse events. The majority of patients reported fatigue, diarrhea, stomatitis and dermatologic adverse effects and present anemia, neutropenia and elevated triglyceride levels. Dose reduction was required in 5 out of 16 patients. Two patients showed partial response, nine stable and five progressive disease. Metastatic sites favouring response were lungs and liver.

Conclusions: Based a) on the beneficial effects of therapy and b) on the resolution of many side effects with continuation of treatment, it may be prudent to advice patients to remain on therapy, when there is no medical reason to withdraw TKI's.

Patients	16
Age (years)	56.5 (46-74)
Sex - number (%)	
Male	9 (56)
Female	7 (44)
Histological type	
<i>Differentiated thyroid cancer</i>	
Follicular variant of papillary TC	5
Follicular TC	5
<i>Medullary thyroid cancer</i>	6
Metastatic disease	
Mediastinal mass-lymph nodes	1
Lungs	7
Liver	7
Bone	4
ECOG performance status-number (%)	
0	15 (94)
1	1 (6)
Time since diagnosis (y)	
Median (range)	3 (1-9)

Table: Individual response and toxicities from TKI treatment

Patients	Sex	Age	Tx duration (mo)	Response to tx	Number of SE in each patient (Grade 3-4)
MAA	F	40	11	SD	6
MA	F	42	11	PR (lungs)	3
KD	M	47	12	PD	4 (fatigue)
CG	M	51	2	ND	6 (fatigue, neutropenia)
PA	M	49	6	SD	6
MK	M	59	2	ND	1 (nasal bleeding)
GS	M	47	4	SD	6
AM	M	72	3	PD	6 (fatigue, mucositis, nasal bleeding)
KL	F	56	2	ND	2
PV	F	64	14	PD	2
AA	F	50	7	PD	6
TA	M	57	2	ND	6 (diarrhea)
PV	F	56	4	SD	7 (hand foot syndrome, vomiting)
MV	F	67	3	SD	9 (cardiomyopathy)
MA	M	64	4	PD	6
TD	M	45	16	PD	6