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A Neurocognitive Improvement with Cinacalcet, what is the Relationship?

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Background: Primary hyperparathyroidism (pHPT) is a common endocrine disorder. In elderly patients with multiple co-morbidities, the decision to "watch and wait" is often most clinically appropriate as operative intervention is associated with high peri-operative risk1. We present an elderly patient with severe hypercalcemia secondary to pHPT.

Case History: A 82-year-old female with a history of diabetes mellitus, hypertension and progressive cognitive and motor impairment classified as atypical parkinsonism came to ED due to a drowsy state. The laboratory investigations showed a severe hypercalcemia associated to increase of PTH. CT and scintigraphic exams highlighted a left parathyroid adenoma with a diagnosis of pHTP. In the meantime she was treated with forced hydration and diuretics and subsequently cinacalcet, given the comorbidity and the bedridden situation. We obtained a normalization and stability of the calcemia values and a clear improvement in vigilance and cognitive picture.

Discussion: Significant functional and cognitive impairment can occur with elevated serum calcium levels in pHTP2. The calcimimetic Cinacalcet almost always controls hypercalcemia and hypophosphatemia sufficiently. Given the high tolerability, affordability, and ongoing beneficial effects on serum calcium, cinacalcet should be considered in people presenting with cognitive impairment and elevated serum calcium who are unfit for definitive surgical management.

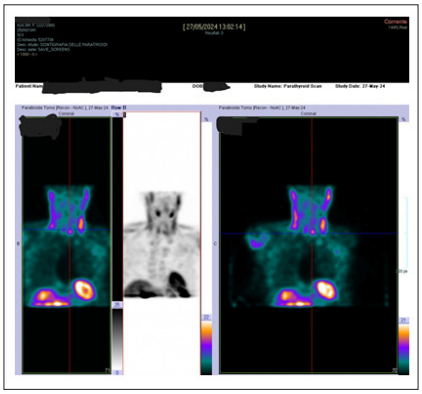

Figure 1: Scintigraphy of the parathyroids with Tc-SESTAMIBI and "dual phase" technique highlights the localization of the area of focal accumulation of the radiopharmaceutical in the postero-inferior region of the left lobe of the thyroid, a picture compatible with a small hyperfunctioning adenoma.

Table 1: Some of the Values of the Patient's Laboratory Parameters During Hospitalizatio

v.n.	WBC (N%, L%) 4.5-11.0	Hb 14-18	PLT 150-400	PCR <1	Creatinina 0.73-1.18	LDH 100-246	PT 70-125	AST 0-34	ALT 10-49	D-DIMERO <500	FIBRINOGENO 145-417	PCT <0.5
	(10^3/uL)	(g/dL)	(10^3/uL)	(mg/dL)	(mg/dL)	(U/L)	%	(U/L)	(U/L)	(ng/mL)	(mg/dL)	(ng/mL)
04/08	35000 (86.7%, 7.5%)	11.3	217	20	0.4	227	42	24	42		474	9.44
08/08	7280 (71.8%, 19.8%)	11.1	187	<0.4	0.4	145	51	17	51		343	1.31
12/08	13490 (50.1%, 39.9%)	9.3	258	<0.4	0.4	141	48	13	42		218	0.15
15/08	14540 (53.3%, 30.1%)	10.3	243	<0.4	0.3	188	54	42	67	1518	240	0.05
19/08	30260 (93.7%, 3.5%)	8.4	67	3.9	0.8	21	38	25	75		204	4.74
20/08	7190 (91%, 4.2%)	7.2	209		0.4	258		300	254			
24/08	10770 (84.7%, 5.9%)	9.2	84	<0.4	0.4	231	50	44	70		147	0.21
01/09	16940 (88.4%, 7.3%)	10.5	81	<0.4	0.4	334	44	91	328		143	0.10
11/09	8340 (31.7%, 62%)	9.4	30	4.6	0.2	262	48	298	422	2038	172	0
19/09	11190 (53.9%,35.2%)	8.8	177	1.1	0.2	261	52	125	145	762	173	0.43
04/10	17000 (63.8%, 25.6)	9.8	195	1.3	0.1	168	46	189	291		319	0.09
19/10	14520 (41.8%,35.8%)	9.1	22	3.6	0.1	149	58	250	411	738	348	0.18
03/11	13420 (49.6%, 34.8%)	10.3	163	3	0.15	120	56	103	183	731	173	0.13
28/11	11670 (32.7%, 48.2%)	9.2	151	2	0.2	134	60	252	319			0.13
18/12	11160 (27,4%, 60.7%)	11.2	111	<0.4	0.3	136	72	222	267	371	208	0.06
02/01	13690 (39.9%, 46.2%)	10.5	130	<0.4	0.3	115	71	154	195	373	206	0.02

References

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