Retreatment with peptide receptor radionuclide therapy (PRRT) in patients with neuroendocrine tumors (NET): Spanish clinical experience from SEPTRALU national registry [1157P]

SEPTRALU
SERIE ESPAÑOLA DE PACIENTES TRATADOS CON RADIONÚCLIDO LUTECIO177

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BACKGROUND

•PRRT is widely used in patients with gastroenteropancreatic NET, supported by the evidence of NETTER-1 and NETTER-2 studies [1,2]. Optimal position of PRRT in the NET therapeutic sequence remains unknown.

•Repetition of a previous succesful therapeutic line in the treatment of patients with NET has been explored in trials like RESUNET, were rechallenge with sunitinib seems active and safe [3]. Currently, PRRT retreatment (rePRRT) has arise as an option for patients with previous clinical benefit to first PRRT (PRRT1).

•Standardized protocols for the optimal efficacy, safety and rePRRT schedule administration remain undefined across centers. Onoing clinical trials are exploring optimal duration and position of rePRRT in NET therapy.

•SEPTRALU is a collaborative spanish national registry for NET patients treated with PRRT. Currently comprises over 500 patients [4]. The aim of the present study is to explore rePRRT outcomes in NET population included in SEPTRALU registry.

REFERENCES

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METHODS

•All patients included in SEPTRALU spanish registry were reviewed. All patients with more than 4 cycles of PRRT were considered for analysis.

•Clincal, pathological and PRRT outcomes variables were collected. Univariate analysis was performed with X^2.

	SEPTRALU (n=522)	RePRRT (N=71)	P
Sex			
Female	208 (39,8%)	29 (59,15%)	0,87
Male	314 (60,2%)	42 (40,85%)	
Age (median)	60	55	
Functioning tumor	169 (32,4%)	25 (35,21%)	0,54
Primary tumor location			
Pancreas	182 (34,86%)	25 (35,21%)	
Small intestine	148 (28,35%)	24 (33,8%)	
Gastric/Colon/Rectum	60 (11,49%)	5 (7,04%)	0,95
Unknown	-	8 (11,26%)	
Pulmonary	56 (10,72%)	5 (7,04%)	
Other	-	4 (5,63%)	
Ki67 (median)	5%	10%	
WHO Grade			
Grade 1	178 (34,1%)	26 (36,62%)	
Grade 2	292 (55,9%)	35 (49,3%)	0,67
Grade 3	52 (9,9%)	10 (14,08%)	

rePRRT	N=71
Time from PRRT1 to rePRRT (months)	29,3
Number of rePRRT cycles	
1	24 (33,8%)
2	30 (42,25%)
3	5 (7,04%)
4	12 (16,9%)
Best radiological response	
PD	8 (11,26%)
SD	28 (36,43%)
PR	12 (16,9%)
NA	23 (32,39%)
ORR (%)	16,9%
PFS (months)	NR
10m PFS	78%

Table 1 (left).Patients characteristics

Table 2 (up). RePRRT characteristics and outcomes

PD: Progressive disease; SD: Stable disease; PR: Partial response; ORR: Overall response rate; PFS: Progression free survival; NR Not reached.

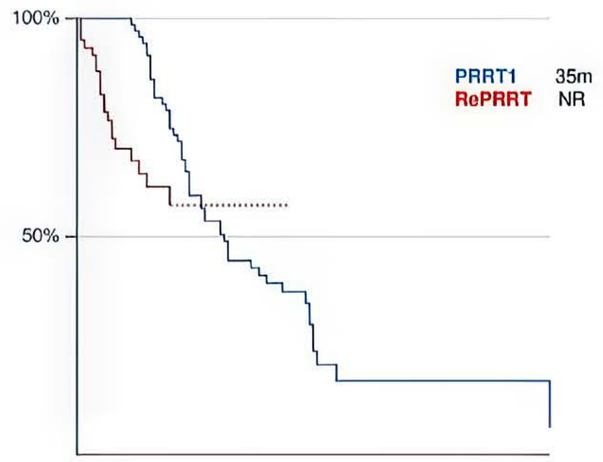

Figure 1.Progression Free Survival: PRRT1 (blue) and rePRRT (red)

RESULTS

•71 rePRRT patients were included. Baseline characteristics are presented in **Table 1**.

•PRRT1 was administered mainly in 2nd (35,5%) and 3rd line (27%) and all patients received 4 doses. Overall response rate (ORR) and progression free survival (PFS) of PRRT1 was 61,7% and 35 months, respectively (**Fig1**).

•Characteristics and outcomes of rePRRT are included in **Table 2**. After 10 months of follow up, rePRRT PFS was not reached (**Fig1**). Considering only rePRRT patients with available radiological evaluation (n=48), ORR was 25%. Main reason for rePRRT discontinuation was disease progression (18%)

•Univariate analysis identified predictors of rePRRT radiological response: **Previous PRRT1 radiological response** (p 0.004), **Ki67 >30%** (p 0.033) and **WHO Grade 3** (p 0.035).

CONCLUSIONS

•RePRRT offers a viable therapeutic strategy for patients with SSTR+ NET, mainly in those with previous benefit to PRRT1.

•Outcomes of rePRRT are limited compared to PRRT1. Radiological responses could be achieved, especially in patients with more agresive NET and those who responded to the PRRT1.

•Ongoing rePRRT trials will help to understand optimal duration and its role in therapeutic algorithms.

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