Sofia Cristóvão Ferreira
IPO Lisboa – Instituto Português de Oncologia de Lisboa
Lisboa, Portugal

Is there a place for re-challenge of PRRT in neuroendocrine tumors?
DISCLOSURE OF INTEREST

- No conflict of interest
**Background**

**Insulinoma** is a rare pancreatic neuroendocrine tumour with insulin hypersecretion that causes hypoglycaemic episodes. It is considered malignant when metastatic.

Conventional therapies provide a transient and partial effect and may be associated with severe adverse effects.

The experience with PPRT (peptide receptors radionuclide therapy) in this context is scarce.

**Clinical case**

Previously asymptomatic 50-yo woman, with no relevant past medical history, diagnosed with a pancreatic neuroendocrine tumor with hepatic envolvement (multiple nodes)
2011/05
Hepatic biopsy: “metastasis of well differentiated NET”
Corpo-caudal pancreatectomy: pNET, G2 (Ki67 10%) – pT1N0M1

2011/12
Started Sunitinib 37,5mg id

2015/06
CT scan: PD and sunitinib discontinuation

2016/06
Hypoglycaemia episodes and diagnosis of malignant insulinoma
Started Diazoxide 25mg 8/8h, with limited clinical benefit

2016/10
68Ga-DOTANOC-PET: hepatic hyperexpression of somatostatin receptors

2016/12
PRRT - 177Lu-DOTA-TATE

- 3 cycles of PRRT every 12 weeks (cumulative activity of 14.4 GBq)
- Octreotide LAR 30mg i.m. at the 1st and 4th week of the 1st and 2nd cycles of PRRT and then, q28d (maintenance treatment)

2nd Dec: 1st PRRT with 177Lu-DOTA-TATE
5th Dec: Resolution of hypoglycaemia episodes
24th Dec: Stopped Diazoxide

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6 mo after:

**68Ga-DOTANOC-PET**: complete metabolic response, residual uptake in liver posterior aspect.

**18F-FDG-PET**: negative

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**2018/04**

**68Ga-DOTANOC-PET**: 1 hepatic lesion w/ hyperexpression of somatostatin receptors

**18F-FDG-PET**: 1 hypermetabolic lesion, concordant with lesion detected by PET-Ga

Relapse: 1 lesion - now positive signal in both FDG- and Ga-PET

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And now?

- Re- challenge w/ PRRT
- Ablation therapy
  - Ablative radiotherapy (MW)
  - Transarterial chemoembolization
  - Metastasectomy
- Systemic therapy
  - Everolimus
  - ChT

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**2018/06**

Chemoembolization

**2019/01**

\[^{68}\text{Ga-DOTANOC- PET}\]: Hepatic hyperexpression of somatostatin receptors (SSTR2, SSTR3 and SSTR5)

\[^{18}\text{F-FDG-PET}\]: Secondary hepatic lesion, occupying the majority of the right lobe, with SUVmax 12.6 (previous 8.5)

**2019/02**

Re-start SSA

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**And now?**

- Re-challenge w/ PRRT
- Everolimus
- Systemic ChT
- New ablation therapy

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Thank you!