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Transarterial Embolisation for Neuroendocrine Tumours

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Introduction/ Review of Literature:

Neuroendocrine tumours are neoplasms from neuroendocrine cells with property to synthesize peptide hormones & biologically active substances responsible for carcinoid syndrome.

The most common sites of origin are **GIT** with most important factors affecting **patient survival** is presence of **liver metastases**. A high **liver tumor burden** poses negative prognostic factor.

Somatostatin analogues are offered as first-line therapy, but response is widely variable.

Intra-arterial therapies are particularly relevant because neuroendocrine liver metastases are highly vascular, supplied by **hepatic artery branches.**

Aims/ Objectives:

- To analyze objective tumor response and clinical outcome in patients with hepatic metastases from NETs who underwent TAE.

- To know the effect of TAE on **hepatic progression free survival** and **overall survival**.

Methodology:

Observational retrospective monocentric study.

44 patients were included in the study.

Inclusion criteria

- Older than 18 years
- Normal LFT, RFT, Coagulation profile
- Disease was predominant to the liver
- HPR: Grade 1 NET with Ki-67 of 1-2%

Exclusion criteria

- Severely impaired LFT, RFT
- Predominant extrahepatic disease
- Poor performance status

TAE was performed with selective catheterization of the hepatic arteries with bland embolization using 300–500 µm PVA particles or gelfoam slurry.

Tumor response - mRECIST criteria by a visual semi-quantitative analysis after 8 weeks from treatment.

Clinical response was evaluated by the progress of carcinoid symptoms, if present.

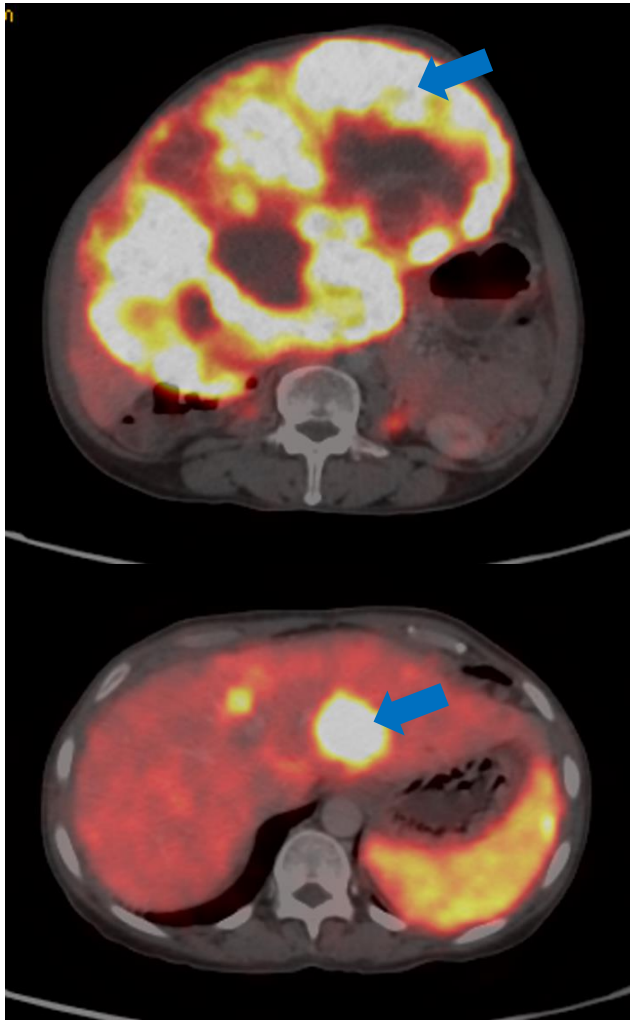
Biological response by changes in tumor marker levels.

Results:

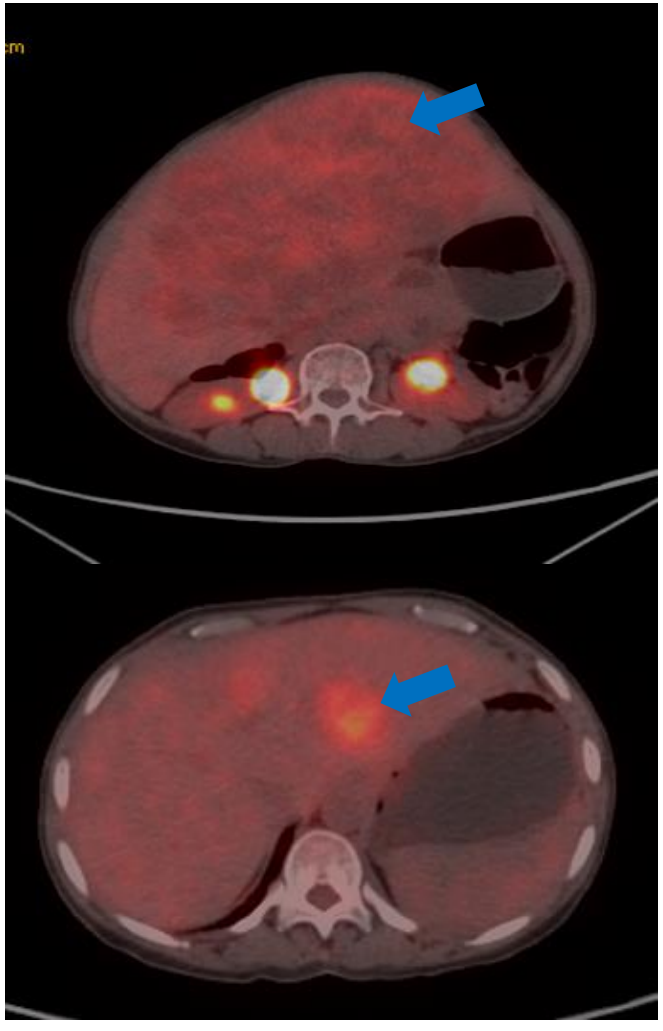
- Amongst the 44 patients, our **Hepatic progression free survival** ranged from 6-84 months
- 2 year HPFS was 48% (21 patients with stable disease at 2 years) with a mean of 26 months
- **Overall survival** ranged from 8-120 months
- 3 year overall survival was 53% with a mean of 40 months

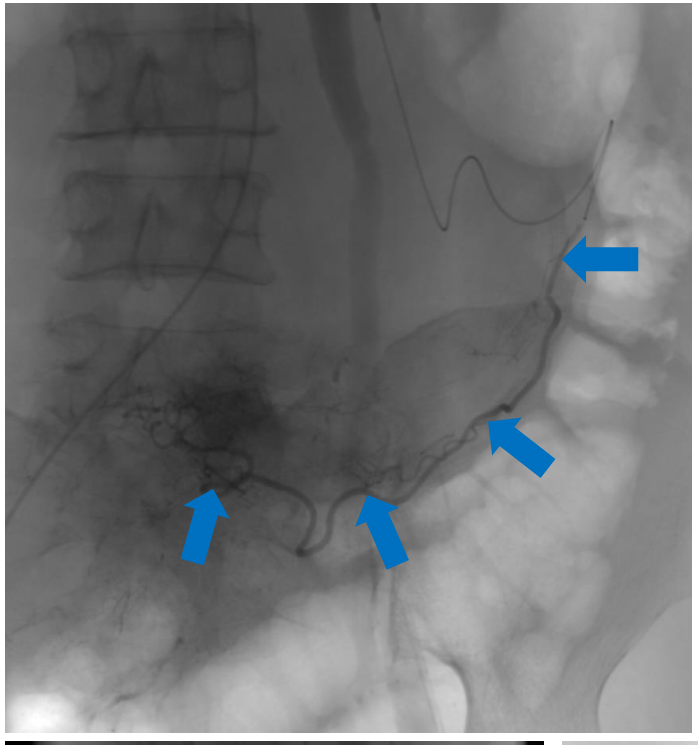
Representative images:

Ga 68 DOTATE PET

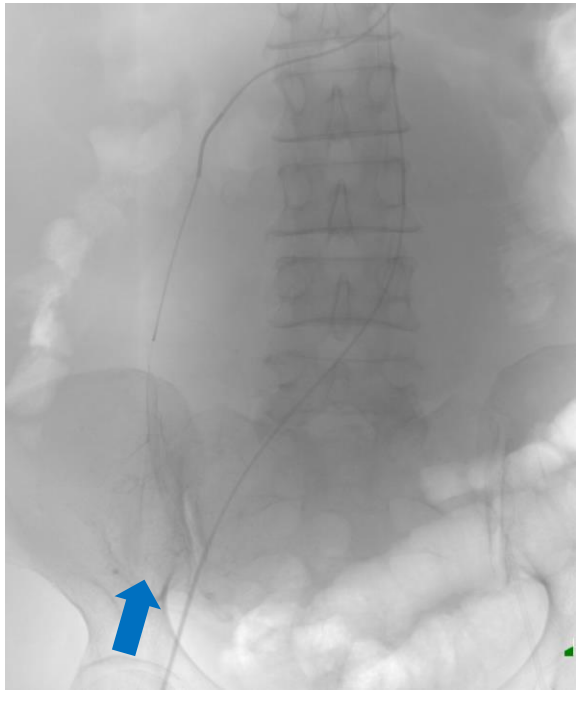


FDG PET





TAE –Bland embolization of the tumor feeders arising from RHA & LHA and GDA confirmed by the C-arm CT scan.



Conclusion:

- **Transarterial therapy** is an accepted method of treatment of unresectable hepatic metastases from neuroendocrine tumors.
- Our study shows that **long term palliation** is possible using TAE, especially in those patients with **predominantly hepatic** disease.
- Hence, TAE could be proposed as **first line non-surgical treatment** in this subgroup.
- TAE can be used **complementary to somatostatin analogues** for controlling hormone related symptoms.
- The need for **repeat therapy** and **interval between sessions** should be tailored according to patient response, tolerance, and need for palliation.

References:

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