

The background features a series of overlapping, colorful waves in shades of orange, red, purple, green, and blue. Some waves are filled with patterns like vertical stripes or dots. Small circles in various colors are scattered throughout the design. The overall aesthetic is modern and vibrant.

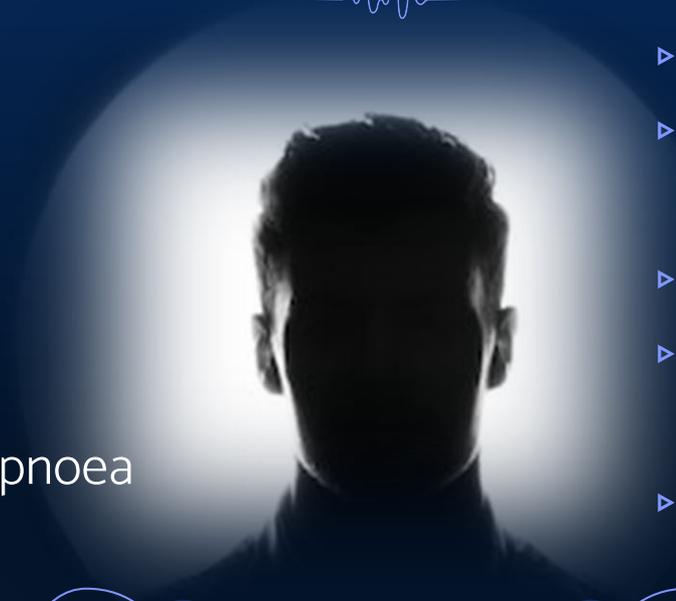
Let's not sugar coat it, this cooks!

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Our Patient – The Challenge



- ▶ 64y male
- ▶ Severe COPD
- ▶ Heart failure
- ▶ Obstructive sleep apnoea



- ▶ 2020
- ▶ Repeated episodes of fatigue, and fainting
- ▶ Not thought to be cardiac
- ▶ Profoundly hypoglycaemic
- ▶ Inappropriately elevated insulin



Initial CT & EUS



Solitary hypervascular hypoechoic mass within pancreatic tail.

Investigations limited, could not lie flat.

Unable to tolerate Octreotide
SPECT or MRI

Findings on Biopsy



- ▶ Well differentiated pNET
- ▶ Grade 1 **functional Insulinoma**
- ▶ Ki 67 proliferation <1%
- ▶ CD 56 & chromogranin positive
- ▶ Started on Diazoxide 150mg TDS to control hypoglycaemia
- ▶ (Mostly) stable for 3 years

An Unsteady Course

Initial medical
management

1

Neuroglycopenic
Seizures

3

High risk surgical
candidate

5

2

Frequent COPD
Exacerbations

4

Admitted for
maximal medical
therapy

6

All other treatment
options exhausted

Enter ESURA



Endoscopic Ultrasound Radiofrequency Ablation

Radiofrequency Ablation



- ▶ Widely used percutaneously in HCCs, RCCs also Oesophageal tumours (over the scope)
- ▶ Focussed high temperatures induce coagulative necrosis
- ▶ EUS-RFA the most recent application

History of Pancreatic Ablation



- ▶ Initially limited by the calibre of the scope working channel
 - ▶ Most percutaneous devices use 18g needles
- ▶ Early cases utilised 100% dehydrated alcohol
 - ▶ Risks of alcohol leak and duodenal injury & pancreatitis
 - ▶ Often required smaller aliquots over multiple sessions

History of Pancreatic Ablation



- ▶ Brachytherapy (Phosphorus-32) effective in phase 2 trials
 - ▶ But difficult to prepare
 - ▶ Cumbersome radiation protection controls
- ▶ Habib needle RFA
 - ▶ Fine probe deployed through a 19g needle
 - ▶ Long burn times, slow to use

The Treatment



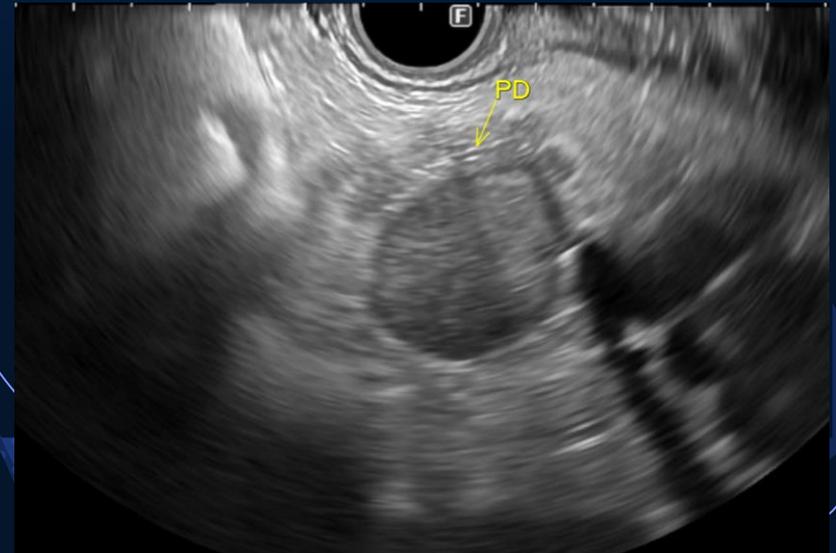
- ▶ Inter hospital transfer QE UHB
- ▶ Continuous IV 10% dextrose infusion
- ▶ Conscious sedation in semi-recumbent position

- ▶ Linear Echoendoscope
- ▶ 19G Aquillant Needle attached to RFA Generator

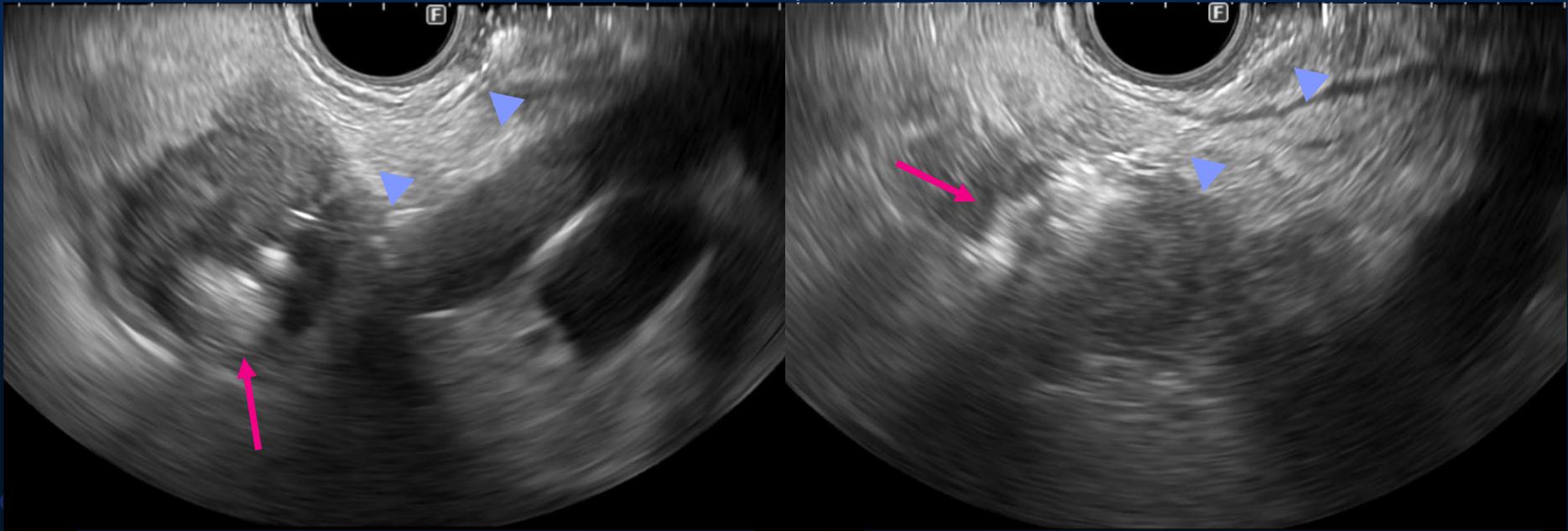
The Target



- ▶ 18 mm hypoechoic lesion
- ▶ Proximity to splenic vessels and pancreatic duct.



The Treatment



First Burn
RFA Needle - Blue Arrowhead

Second Burn
Area of effect – Pink Arrow

Outcome



- ▶ Successful target ablation
- ▶ No complication
- ▶ Dextrose infusion stopped following day

- ▶ 3 month FU – No further severe hypo episodes
- ▶ Requiring only low dose diazoxide to maintain.

Learning Points



- ▶ Uncommon situation
- ▶ Majority (70%) pNETs are non-functional
- ▶ EUS-RFA considered when no surgical option
- ▶ Goal is to reduce hormonal hypersecretion syndrome

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A decorative graphic at the bottom of the slide features a horizontal line with various colorful shapes and patterns. Above the line, there are wavy shapes in orange, purple, red, and blue, some with vertical stripes or dots. Below the line, there are green, yellow, and red shapes, also with patterns like dots or stripes. Small circles in various colors (blue, yellow, purple, red) are scattered throughout the graphic.