E-poster

When Clarity Emerges from Asymmetry: The Role of PASCOM and Interictal PET in a Case of Drug-Resistant Epilepsy

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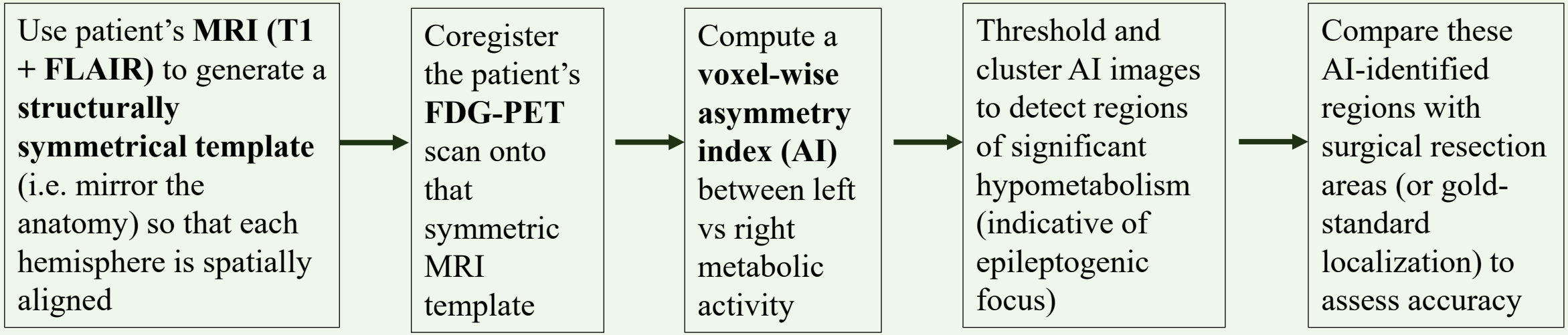
INTRODUCTION

- Epilepsy affects over 50 million people globally, with nearly one-third remaining drug-resistant despite optimal medical therapy.

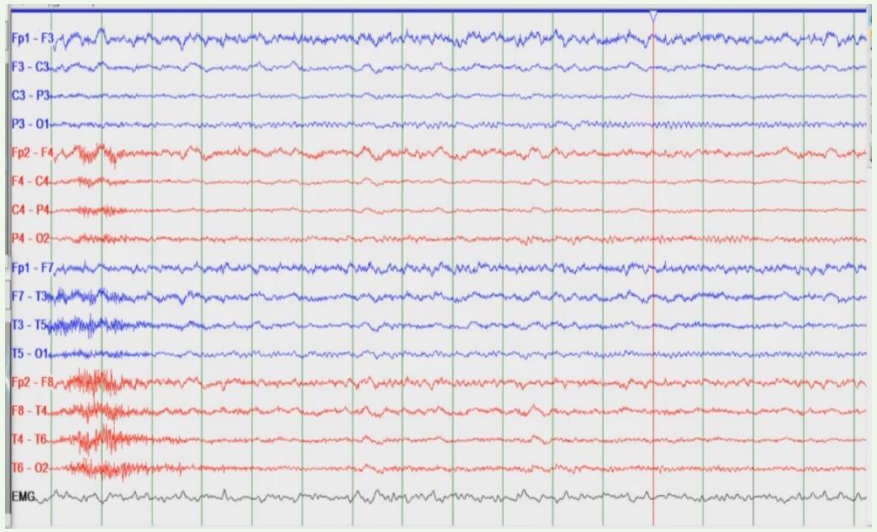
- For these patients, identifying the EPILEPTOGENIC ZONE is key to offering a potential cure through surgery.

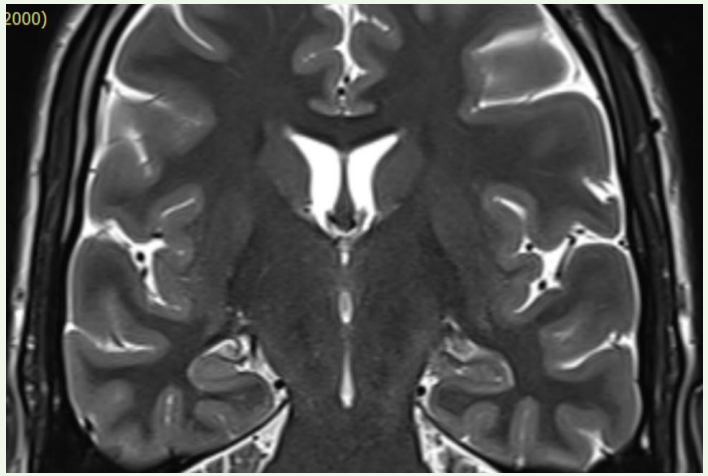
- However, when standard investigations yield discordant or inconclusive findings, the challenge deepens : comes the role of **multimodal fusion approach** - **PASCOM** (PET Asymmetry after anatomical Symmetrisation Computation)

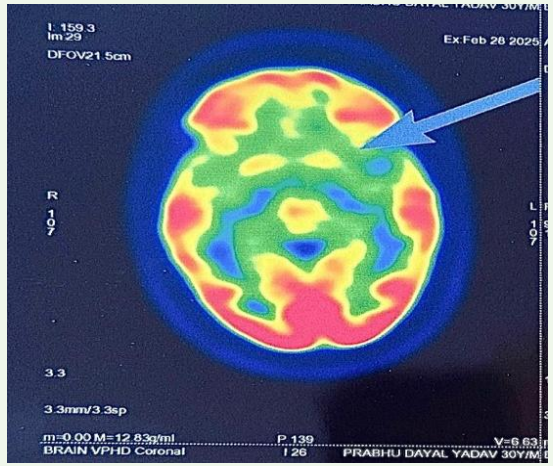


CASE REPORT

- 30-year-old man with drug-resistant epilepsy for 3 years, experiencing frequent disabling seizures.







24 Hour Neurotelemetry – Seizures arising from LEFT temporal region

MRI brain, HARNESS PROTOCOL done initially : Normal

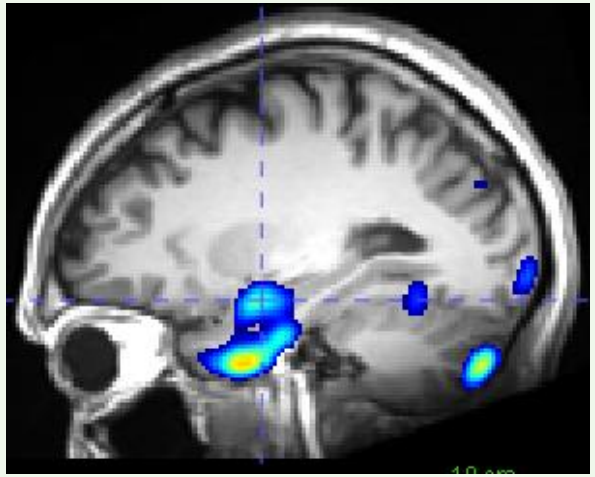
Brain PET Scan : Hypometabolism in RIGHT anterior temporal and frontal cortex

SIGNIFICANT CLINICORADIOLOGICAL MISMATCH

OUR NOVELTY :

PASCOM — PET Asymmetry after Anatomical Symmetrization Coregistered to MRI –

Advanced imaging technique that amplifies subtle interhemispheric metabolic differences.

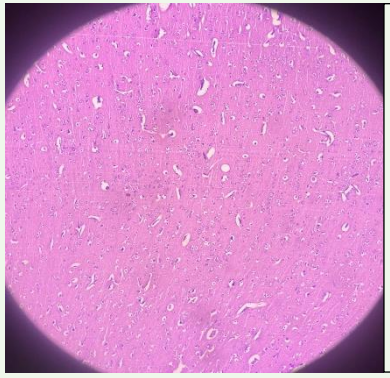


It localized hyper metabolism (**SINCE PET WAS ICTAL**) to the **LEFT MESIAL TEMPORAL REGION**, aligning with EEG findings.

Repeat MRI brain – Thin section cuts done: poor grey white matter differentiation in left mesial temporal area.

Underwent ECOG-guided **Left Amygdalohippocampectomy.**

Post-surgery, seizure-free for 6 months, with tapering of medications.



Histopathology done : suggestive of FOCAL CORTICAL DYSPLASIA type IIb/ IIIB.