

A case report: Intracavitary electrocardiogram guidance for peripherally inserted central catheter in a patient with atrial flutter 2:1 conduction.

INTRODUCTION

The intracavitary electrocardiogram (IC-EKG) locates the peripherally inserted central catheter (PICC) by observing electrocardiographic variations as the catheter approaches the crista terminalis. Atrial flutter with 2:1 conduction is a tachycardia characterized by the presence of “F” waves with a “*sawtooth pattern*” where the atrium reaches frequency between 250-300 bpm and the ventricle 125 to 150 bpm.

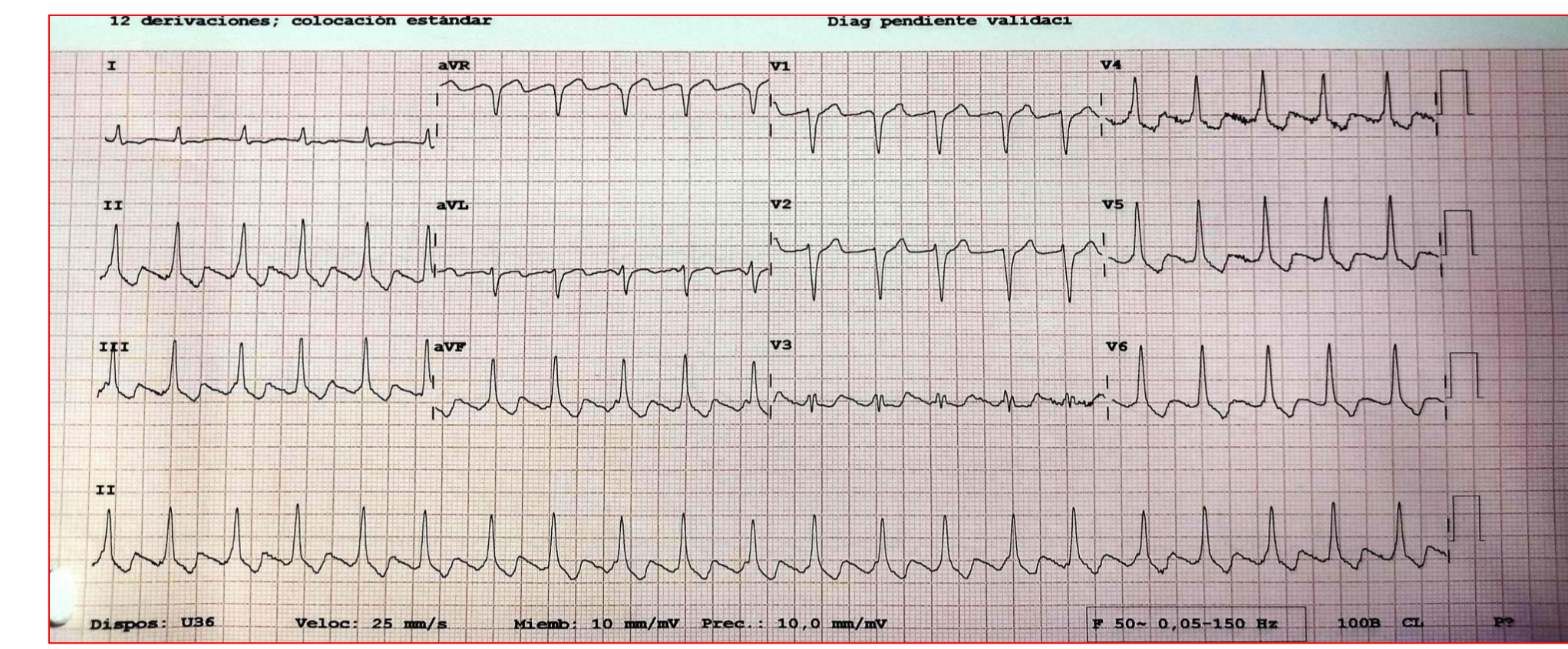


Figure 1: ATRIAL FLUTTER 2:1

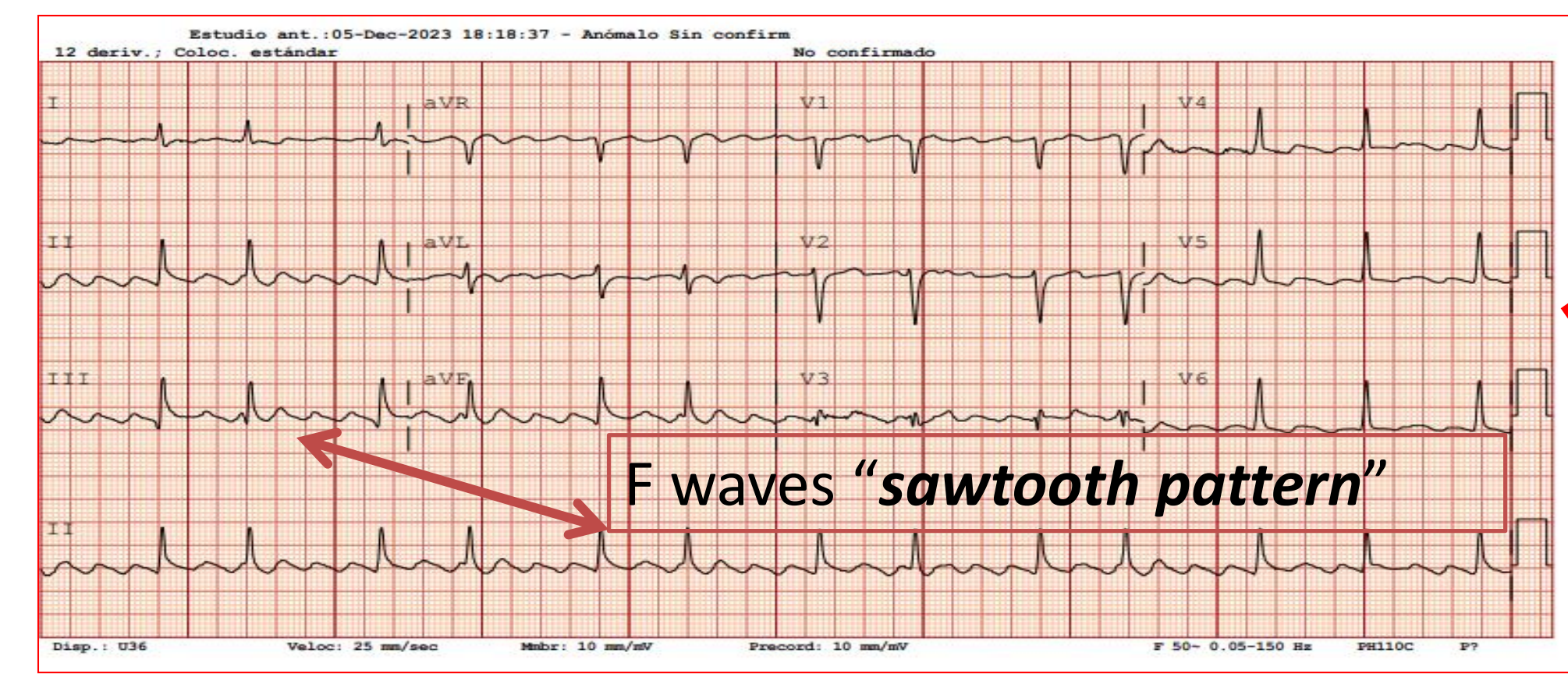


Figure 2: ATRIAL FLUTTER (AF) VARIABLE RESPONSE

OBJECTIVE

Describe the location of the PICC with IC-EKG in a patient with atrial flutter 2:1 conduction.

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METHOD

- WOMAN
- 76 YEAR OLD
- LYMPHOMA DIFFUSE LARGE CELL
- NO RELEVANT MEDICAL HISTORY

PATIENT

- CHEMOTHERAPY INFUSION
- SINUS RITHM
- RAPEVA : PICC WAS PLANNED

ASSESSMENT

- ISP: BUNDLE
- PICC: 32CM LENGTH
- EKG: ATRIAL FLUTTER
 - EKG-IC MODIFIED
- CHEST X-RAY
- ECHOCARDIOGRAM
 - TRANSTHORACIC: (ETT)
 - TRANSESOPHAGEAL (ETE)

PICC INSERTION TIP LOCATION

RESULTS: TIP LOCATION

EKG-IC: ATRIAL FLUTTER



Figure 3: IC-EKG IN AF 2:1

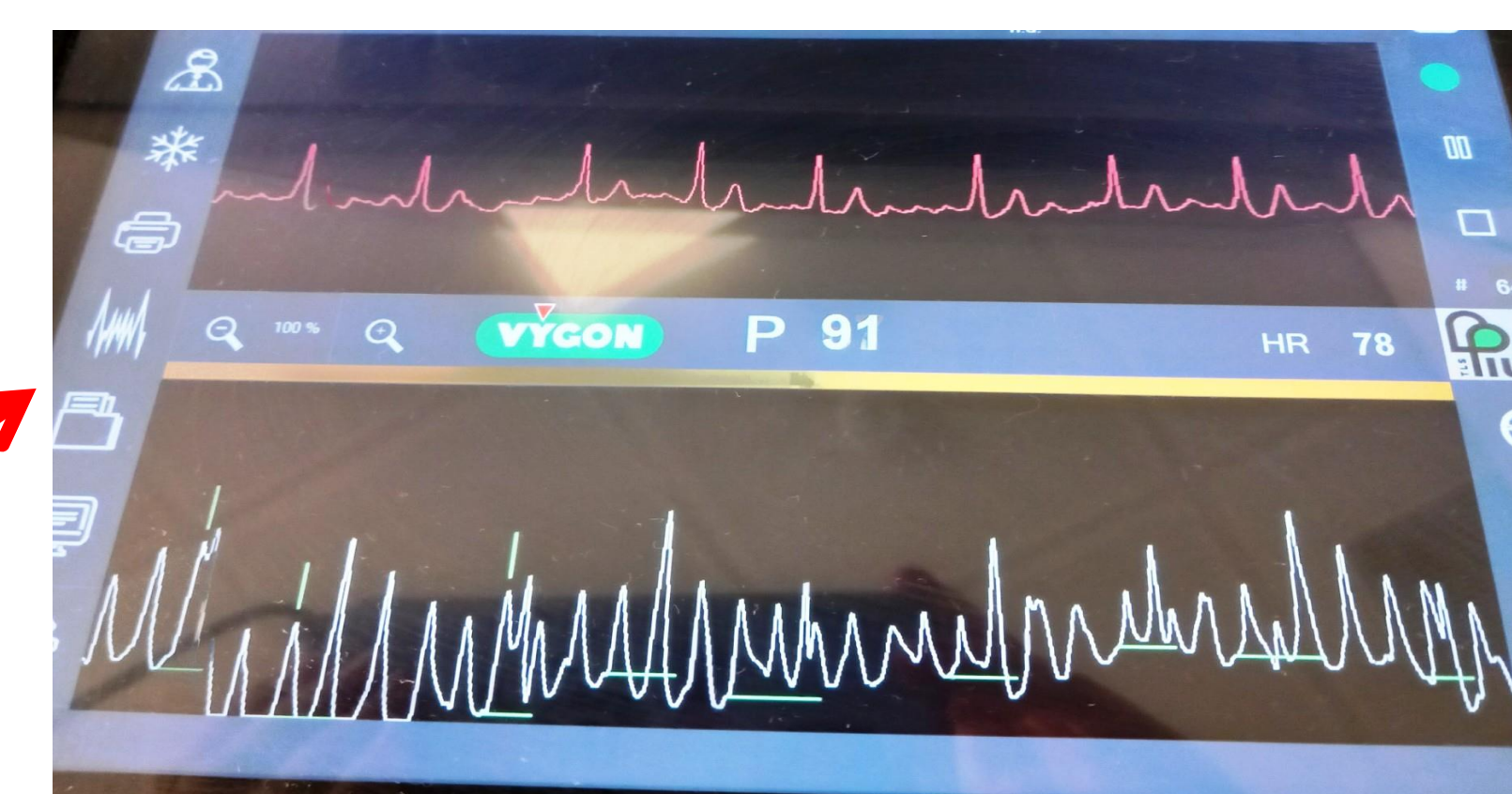
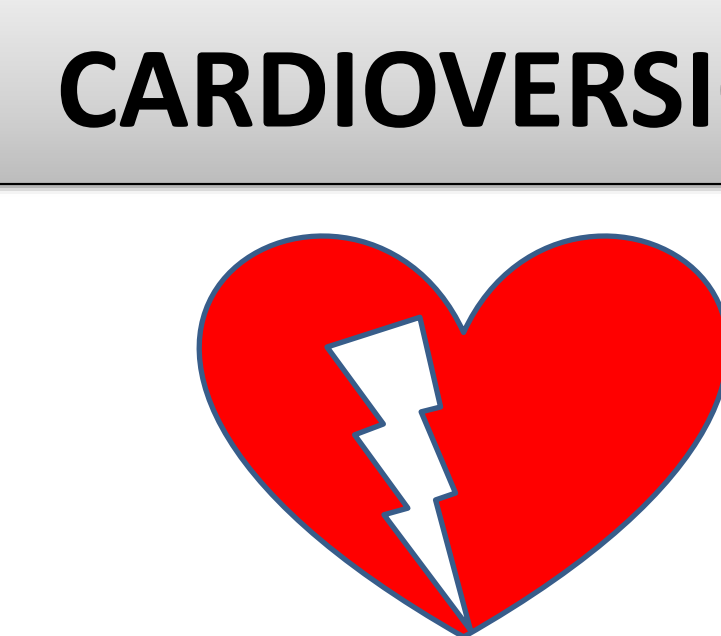


Figure 4: IC-EKG IN AF VARIABLE RESPONSE



Figure 5: IC-EKG MODIFIED



CARDIOVERSION

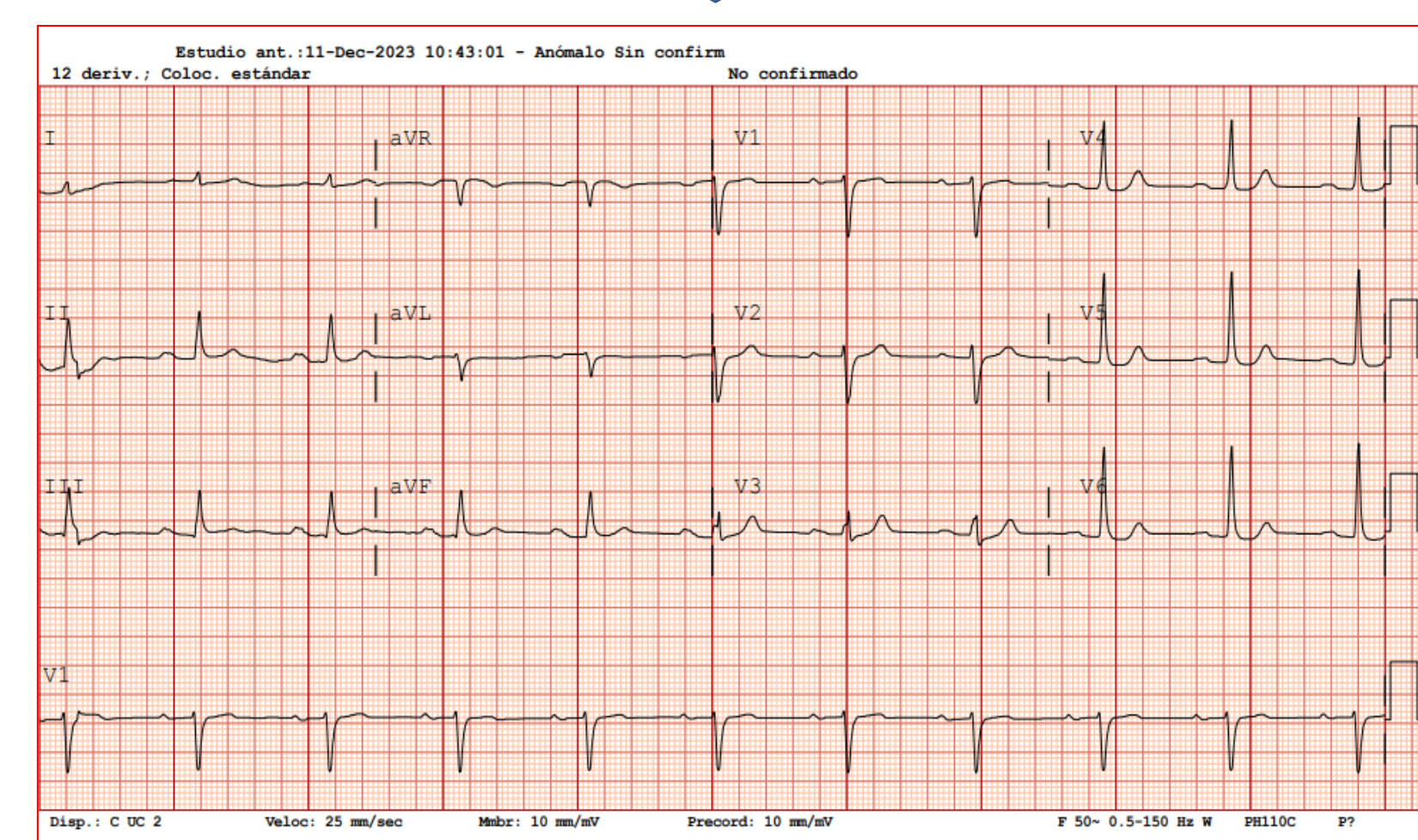


Figure 6: EKG IN SINUS RHYTHM

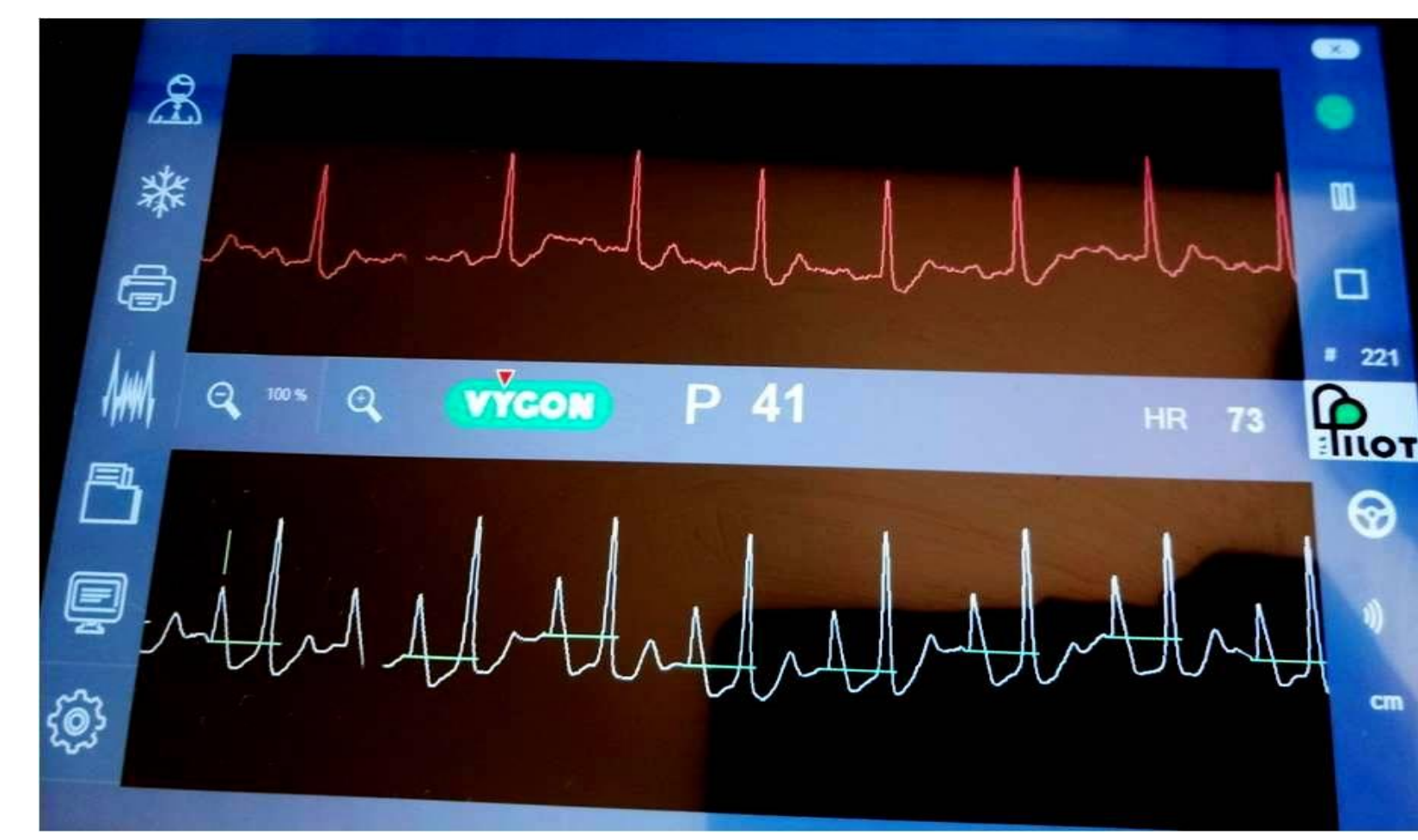


Figure 7: IC-EKG IN SINUS RHYTHM

IMAGE TESTS

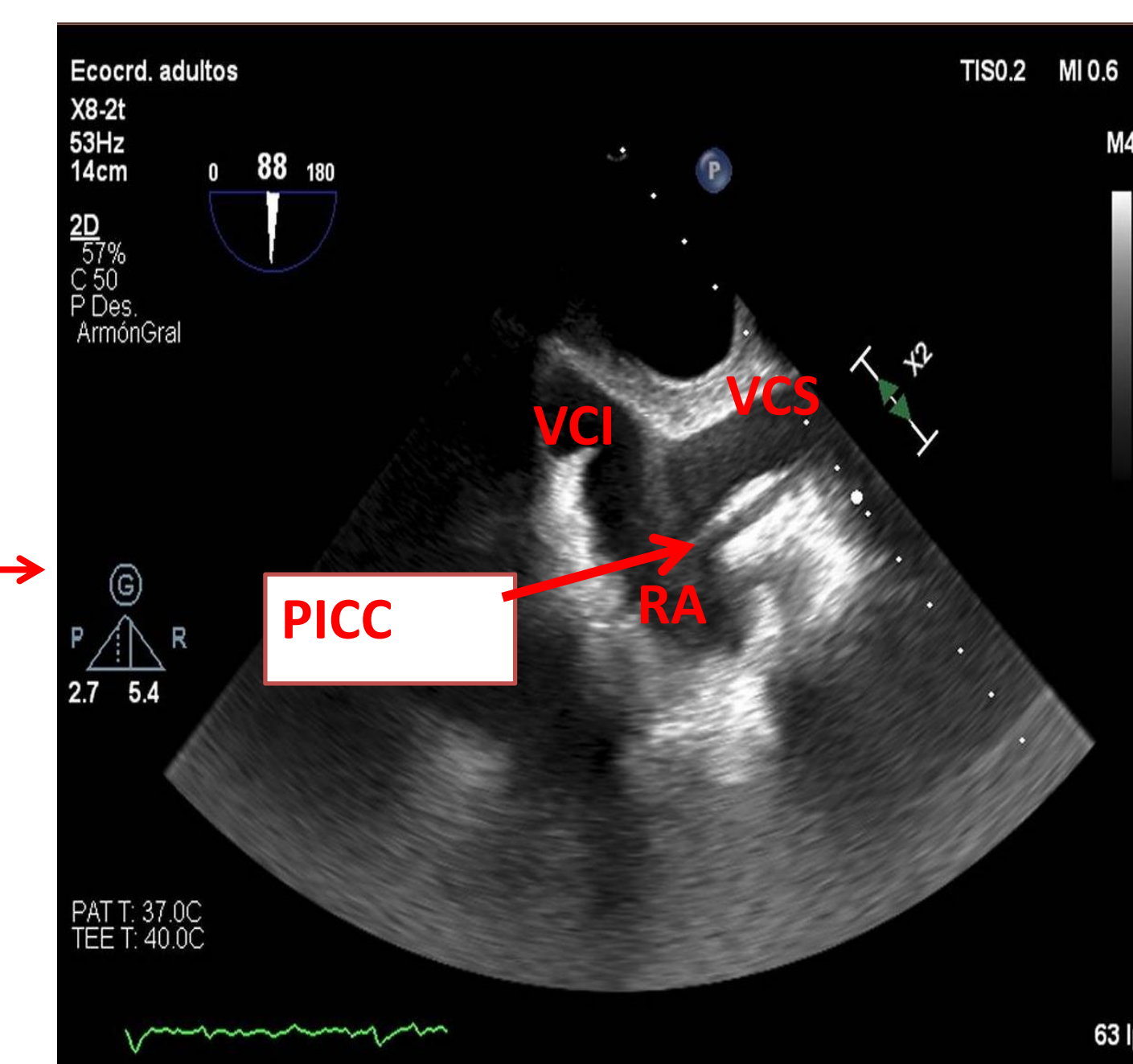


Figure 8: ETE

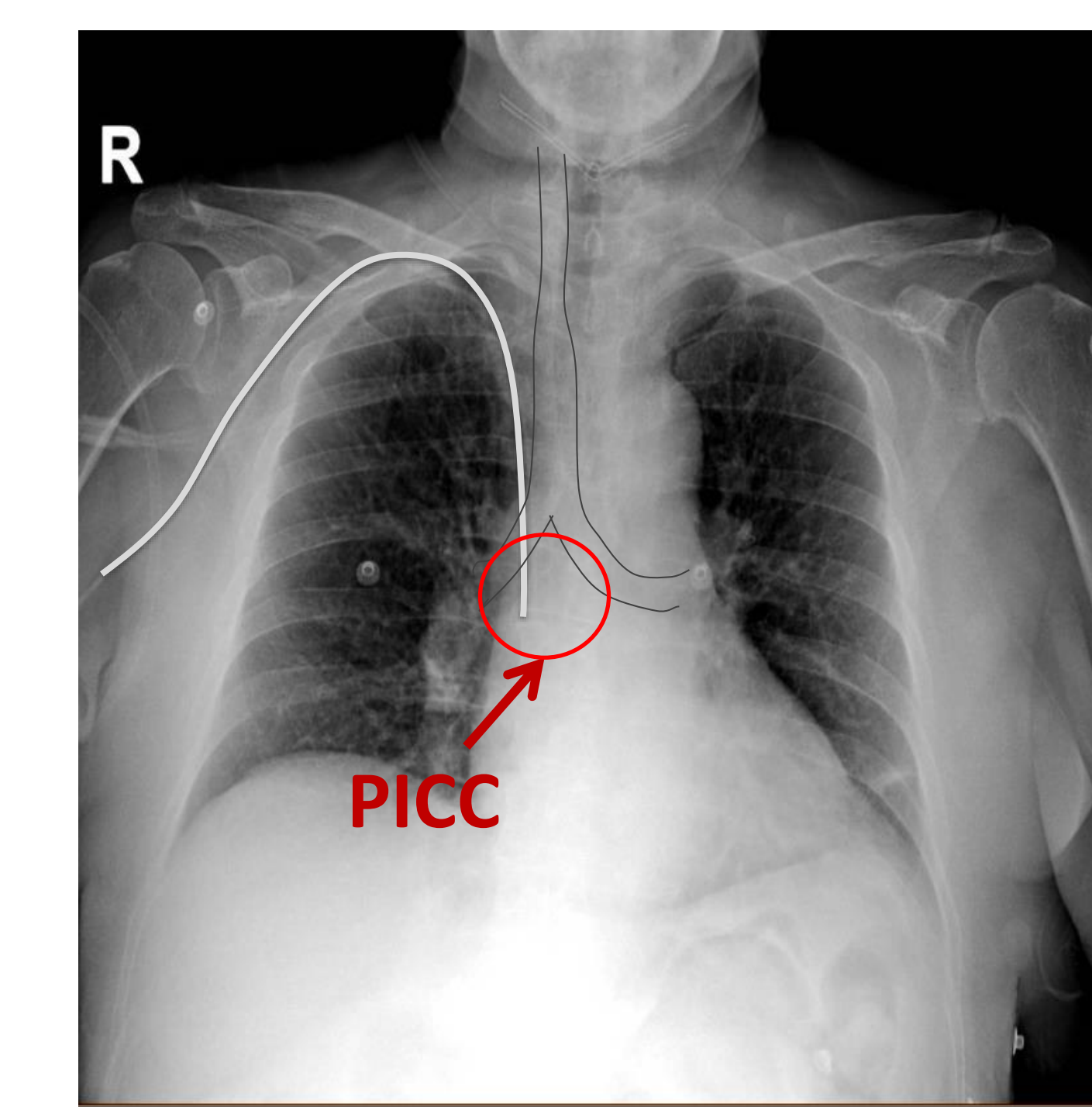


Figure 8: CHEST X-RAY

CONCLUSIONS

- Both the modified EKG-IC and the usual EKG-IC are a useful and safe techniques in locating the PICC during arrhythmia.
- Modified IC-EKG or recording at 50mm/s to observe an increase in “F” waves in the usual IC-EKG, facilitate the visualization of changes in F waves for tip position.

BIBLIOGRAPHY

