

# INTRAOPERATIVE PARATHYROID HORMONE MONITORING DURING PARATHYROIDECTOMY: DESCRIPTION OF OUR CLINICAL EXPERIENCE.

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## INTRODUCTION

❖ Primary hyperparathyroidism is caused by a single adenoma in 85% of cases. This is why bilateral neck exploration seems to be a very aggressive procedure in a large number of cases. Intraoperative parathyroid hormone (IOPTH) monitoring could be a useful tool in primary hyperparathyroidism surgery allowing a less invasive surgical approach. The aim of our study is to evaluate the possible impact of the measurement of IOPTH during surgery.

## METHODS

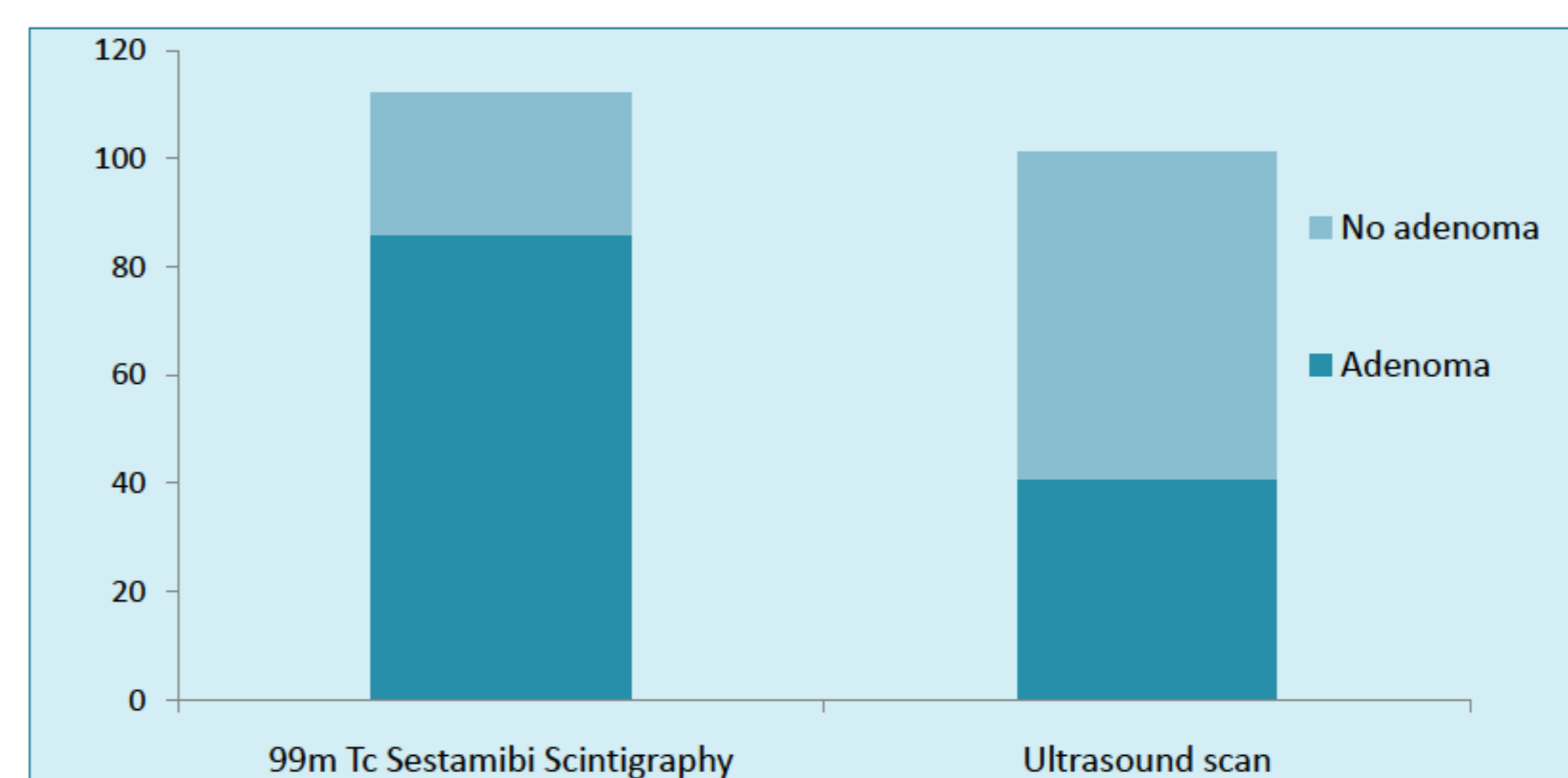
❖ Retrospective study in which we included all patients who underwent parathyroidectomy with IOPTH monitoring between 2008 and 2013. We considered the following variables:

- ❖ Preoperative localization techniques.
- ❖ Neck exploration (uni or bilateral).
- ❖ Prediction of curative parathyroid resection by using MIAMI criteria (>50% drop from highest baseline IOPTH level at 10 minutes after excision)
- ❖ Cure (normal calcemia 6 months after surgery).

❖ Subsequently, we compared this sample with a group of patients who underwent parathyroidectomy between 2000 and 2002 without IOPTH monitoring.

## RESULTS

Description IOPTH group.	
Patients	115
Mean age (years)	57.4 ± 14.1
Female/Male (%)	80,9/19,1



■ <sup>99m</sup>Tc Sestamibi Scintigraphy 97,4% (76,8% adenoma).

■ Ultrasound 87,8% (40,6% adenoma).

TABLE 1. PREOPERATIVE LOCALIZATION TECHNIQUES

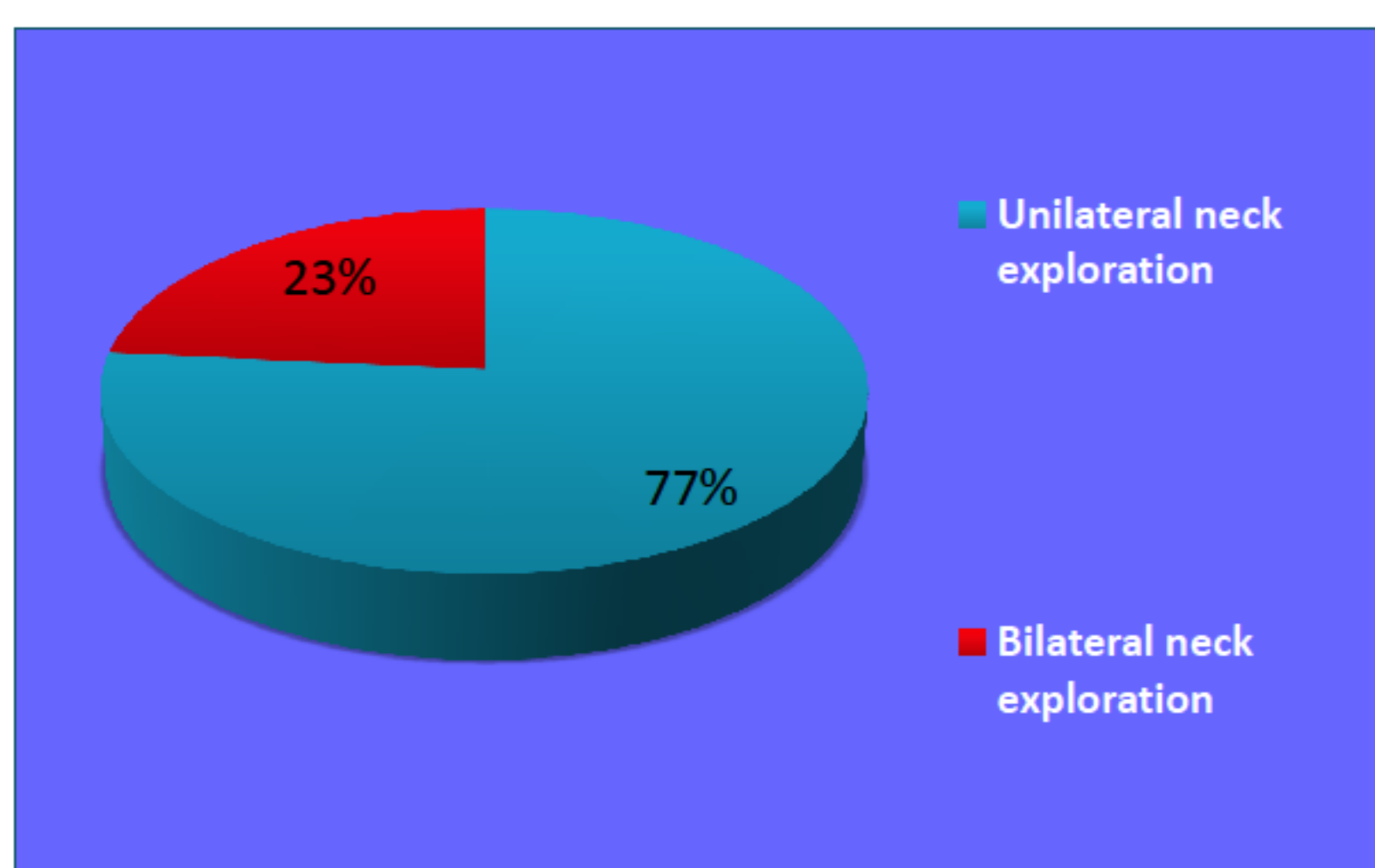


TABLE 2. NECK EXPLORATION

■ Unilateral neck exploration: 100% cure.  
■ Bilateral neck exploration: 74% cure (p<0-0005)

	CURE	NO CURE	
> 50% drop IOPTH.	104 (97,4%)	3	107
< 50% drop IOPTH	4	4	8
	108 (93.9%)	7	115

TABLE 3. PREDICTION OF CURATIVE PARATHYROID RESECTION BY USING MIAMI CRITERIA.

Description No-IOPTH group.	
Patients	35
Mean age (years)	58.5 ± 9.1
Female/Male (%)	74.3/15.7

	CURE	NECK EXPLORATION
IOPTH group	93.9%	23.5% bilateral
No-IOPTH group.	91.4%	100% bilateral
	P=0.61	p=0.0005

TABLE 4. COMPARISON BETWEEN IOPTH AND NO-IOPTH.

## CONCLUSION

❖ By monitoring IOPTH in focused parathyroidectomy it is possible to perform a less invasive surgical approach without reduction in cure rate.

