



# Timing is Everything? Postpartum Pituitary Dysfunction— Variability of Clinical and Radiological Presentation

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## Introduction

Management of lymphocytic hypophysitis does not require surgery in most cases, thus, pathology is usually absent, and the clinical presentation, in combination with laboratory and imaging characteristics establish the diagnosis.

We aimed to describe the various patterns of presentation, including assisting analyses, among women with clinical diagnosis of lymphocytic hypophysitis.

## Patients and Methods

Patients included had pituitary hormonal deficits that presented during or after delivery, without traumatic delivery.

Information on clinical presentation, laboratory tests (PRL, estradiol, LH, FSH, cortisol, thyroid function tests, growth hormone (GH), insulin-like growth factor-1 (IGF-1) and biochemistry), and pituitary imaging were collected.

## Results

- Nine women were included; mean age at delivery was 33.7±7.8 years.
- Headache was reported in five, during pregnancy (in 2/5), or 2, 4 and 9 months following delivery in 3/5.
- Hypopituitarism symptoms appeared during pregnancy in one patient (DI), immediately after (in 5) or 7-12 months following delivery in 2.
- Hypopituitarism symptoms- 6/9 had difficulty to breastfeed, and 2/9 had secondary amenorrhea.
- Two patients received high-dose glucocorticoids. Both had rapid improvement in their complaints, and the radiological findings normalized.
- Both patients had panhypopituitarism and showed partial pituitary function recovery.

### Main findings at diagnosis, according to diagnosis timing relative to delivery.

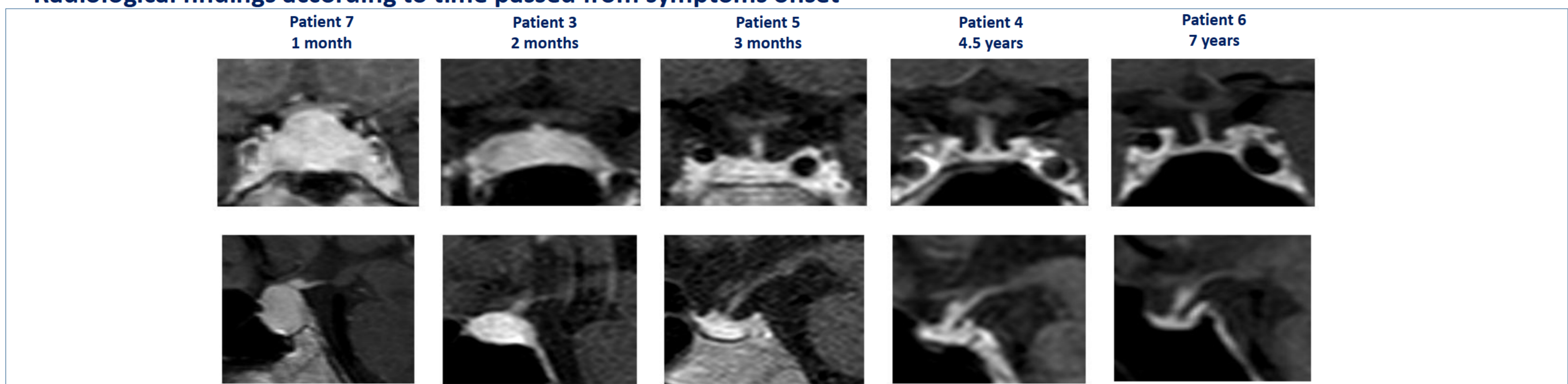
Diagnosis time	4m of pregnancy	Delivery	2m	6m	8m	12m	4.5y	7y
Pregnancy			Post-partum period					
Main symptom at diagnosis	DI		Breastfeeding difficulty	Headache	Headache	Headache	Fatigue	Amenorrhea
Headache (y/n)	No		Yes, No, No	Yes	Yes	Yes	Yes	No
Imaging findings	Loss of bright spot		Susp apoplexy Susp hypophysitis Normal	Susp hypophysitis	Microadenoma	Sellar mass, chiasmal pressure	Reduced volume	Reduced volume
Patient number	9		1,3,5	7	2	8	4	6

### Pituitary axes dysfunction and recovery, and hormone replacement therapy

Patient No	1	2	3	4	5	6	7	8	9
Diagnosis (relative to symptom onset)	2m	11m	2m	4.5y	10m	7y	2m	5m	immediate
<b>Pituitary function - Baseline</b>									
GH deficiency	+	+	+	+	+	+	+	NA	+
Hypogonadotropic hypogonadism	+	+	+	+	+	-	+	+	+
Central hypothyroidism	+	+	+	NA	-	+	+	+	NA
Central hypocortisolism	+	+	+	1° hypothyroidism	+	+	+	+	1° hypothyroidism
Prolactin	Normal	Normal	Low	Normal	Low	Normal	Normal	Low	High
<b>Axes Recovery</b>									
GH deficiency	NR	NR	Rec	NR	NA	NA	NR	NA	NR
Hypogonadotropic hypogonadism	NR	NR	NR	NR	Rec	NA	Rec	Rec	NR
Central hypothyroidism	NR	NR	NR	NA	NA	NR	Rec	NR	NA
Central hypocortisolism	NR	NR	NR	NR	NR	NR	Rec	Rec	NA
Prolactin	NA	NA	Rec	NA	NA	NA	NA	Low	NA
Current treatment (GH,E,T,GC,Des)	E,T,GC	E,T,GC	T,GC	E,T,GC	GC	T,GC	s/p High dose GCs	GC,T	E, Des

Rec, Recovered; NR, Not Recovered; NA Not Available

### Radiological findings according to time passed from symptoms onset



## Conclusions

Lymphocytic hypophysitis typically presents early with obvious clinical picture, but the diagnosis might be established only years after delivery due to non-specific and indolent complaints, requiring high index of suspicion by the treating physician.