Menstrual Irregularity – Should we investigate?

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HISTORY

- 16 year old girl, ms X presented with
- Irregular menstruation since menarche at 11 years (past 5 years)
- Lasting for 5-15 days followed by a gap of 1 week followed by the next cycle. Clots+. Not associated with dysmenorrhoea
- Headache for 1 year
- What do we do next?

History relevant to dub

- Intermenstrual bleeding
- Oligomenorrhoea
- Secondary amenorrhea
- Menorrhagia
- Polymenorrhoea

History relevant to DUB

- Weight gain
- Symptoms of hyperandrogenism: acne, hair fall, hair growth
- Hypothyroid sympotms: neck swelling, constipation, poor scholastic performance, weakness, short
- Cushingoid features
- Prolactinoma – features of rasied ICT, galactorhhoea
- Bleeding tendence – skin bleeds

FAMILY HISTORY

- She is the second child of non consanguinous marriage. Her elder brother is fine.
- She was born by normal delivery. Developmental milestones were age appropriate.
- Grandmother (maternal) has gastric carcinoma.
- Diabetes in family - nil

Examination

- Weight-60.5kg
- Height-155cm
- BMI-25.16

GENERAL EXAMINATION

- Overweight
- No thyroid enlargement
- Fundus normal
- No cushingiod features
- No evidence of hirsuitism
- Tanner's SMR rating: stage 4
- Systems normal

Irregular Menstrual Cycles - causes

- Normal variant
- Polycystic ovarian syndrome – MC cause
- Hypothyroidism
- Late onset congenital adrenal hyperplasia
- Ovarian/adrenal tumors
- Prolactinoma
- Hypothalamic causes

Diagnosis of PCOD

Table 1
PCOS Definitions 1990–2009

PCOS Definition	Clinical Hyperandrogenism (Ferriman-Gallwey Score ≥ 8) or Biochemical Hyperandrogenism (Elevated Total/Free Testosterone)	Oligomenorrhea (Less Than 6-9 Menses per Year) or Oligo-Ovulation	Polycystic Ovaries on Ultrasound (≥ 12 Antral Follicles in One Ovary or Ovarian Volume ≥ 10 cm^3)
NICHD (1990)[2]	Yes	Yes	No
Rotterdam (2003)[3]	Yes	Yes	Yes
		2 of 3 criteria	
AE-PCOS Society (2009)[4]	Yes	Yes	Yes
		1 of 2 criteria	

In adolescent, Both Hyperandrogenism and oligomenorrhoe need to be present for diagnosis of PCOD

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Investigations in Adolescent DUB/PCOS

- Total Testosterone
- LH
- FSH
- Prolactin
- TSH
- 17-OHP
- DHEAS
- Cortisol
- Fasting insulin
- GTT, lipid profile
- USG Pelvis/Adrenals/Ovaries

INVESTIGATIONS IN OUR CHILD

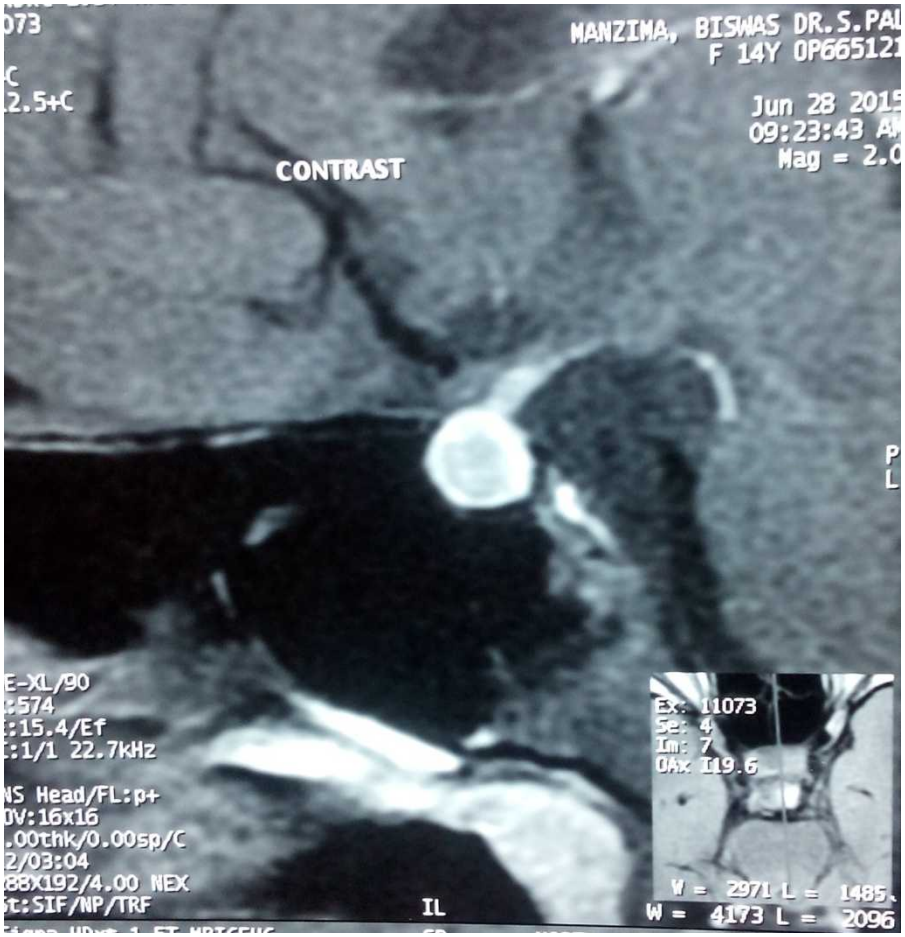
- Investigations done revealed:
- RFT/LFT normal
- Thyroid functions – within normal limits(TSH -4.19)
- LH 9.3 miu/ml
- FSH 5.6 miu/ml
- Testosterone – 26 (10 - 40)
- USG pelvis – normal ovaries
- serum prolactin-228ng/ml (4-23)

DD for hyperprolactiemia

- Drugs
- Hypothyroidism
- Chronic kidney disease
- Chronic liver disease
- Prolactinoma
- Macroprolactinoma

- In our case, no drug history, normal TSH, creatinine, SGPT and she was symptomatic
- Prolactinoma suspected

MRI sella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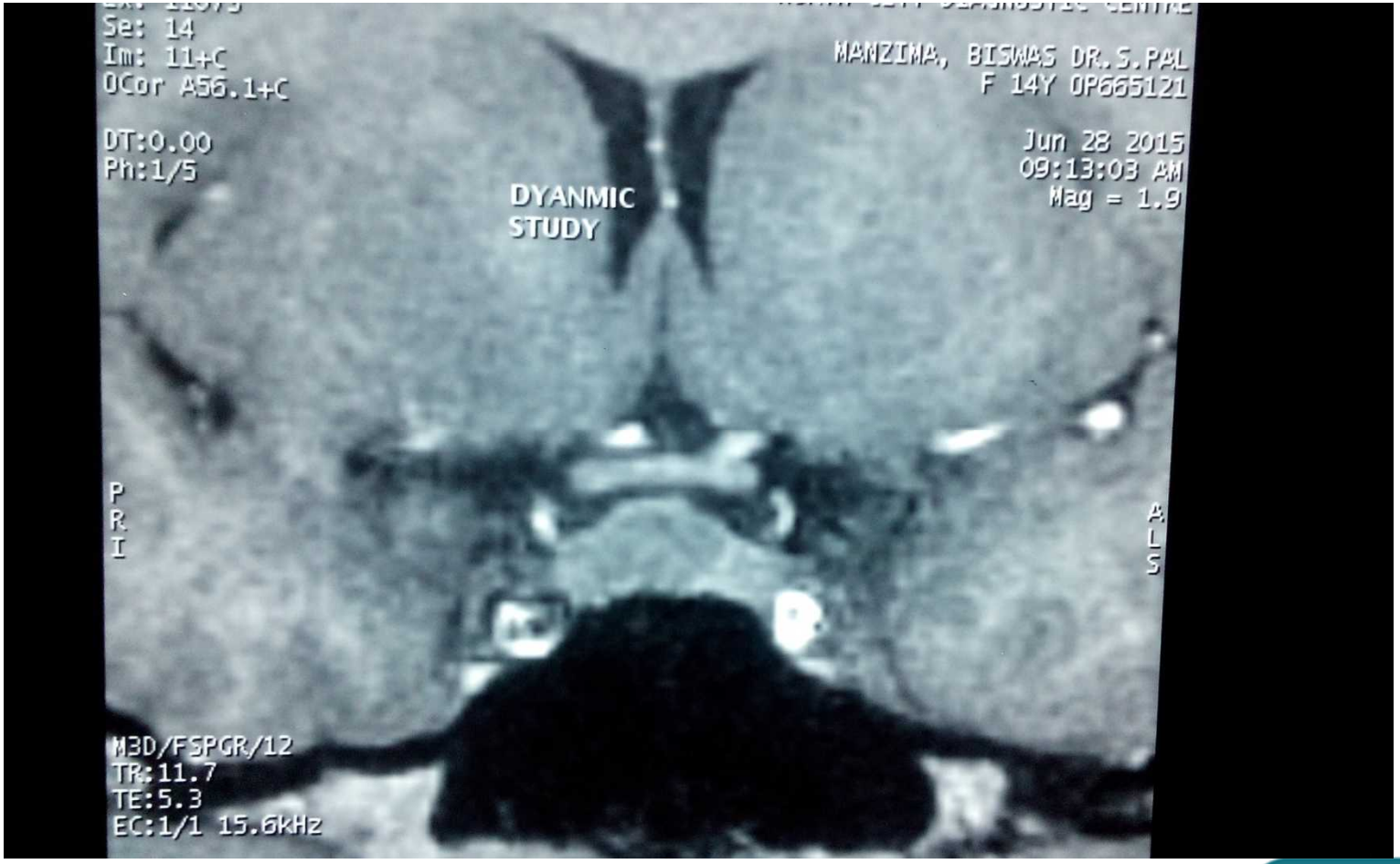
MRI Sella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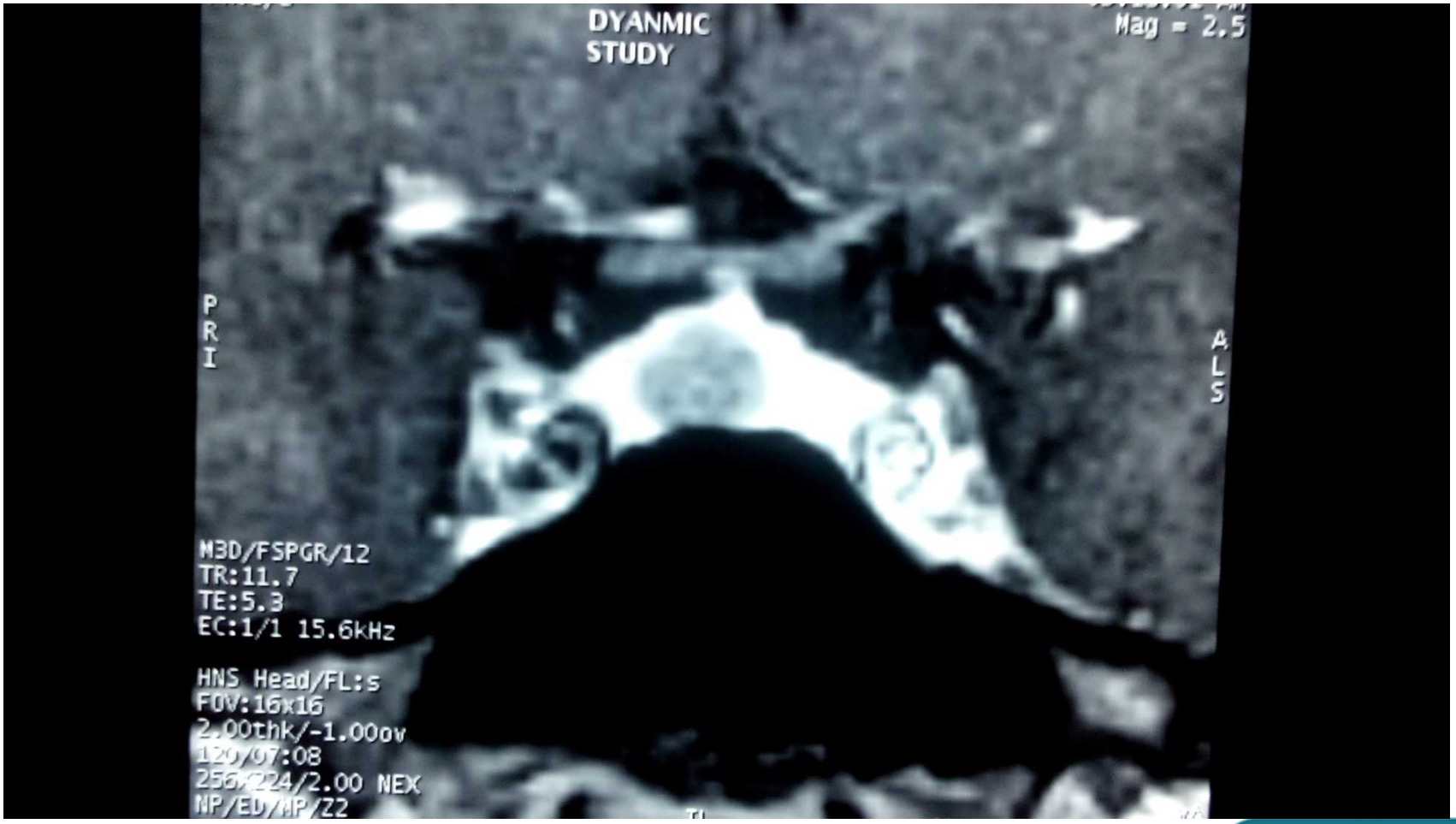
MRI Sella dynamic scan



MRI sella

- Pituitary gland was enlarged with convex superior surface and mild left displacement of pituitary stalk
- Small ovoid less enhancing area in the early post contrast study
- Mild enhancement on the right side of pituitary in the late post contrast study
- s/o microadenoma
- 6.6mm vertically x 8.5mm transeversely and 7.2mm AP dia
- Rest of the gland – homogenous enhancement

Is it isolated prolatinoma or part of MEN-1?

- No early morning hypoglycemia or recurrent stomach pain
- Total calcium 9.7
- Parathyroid Hormone: 56.6
- IGF-1 - 209(low normal)

Final Diagnosis

- Pituitary adenoma – Microadenoma/prolactinoma

- On questioning, one episode of galactorrhoea present

Management of Prolactinoma

- Dopamine agonist
- Surgery
- Radiotherapy

COURSE OF ILLNESS

- Treated with cabergolin 0.25 started once weekly
- Repeat Prolactin 44 ng/ml
- later increased to twice weekly and on regular follow up
- Cycles regular at present

Take home message

- Irregular cycles need evaluation to avoid missing similar cases
- Ask for specific targeted history for the DD of PCOS
- Prolactin estimation needed in adolescent PCOS to exclude prolactinoma
- DA agonist sufficient in most cases.
- Sx if tumor does not shrink

THANK YOU

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