Objective: Cabergolin is a long acting dopamine receptor agonist used for the treatment of patients with recurrent Cushing's disease.

Case: 16 year-old female patient admitted to the hospital because of short stature, amenorrhea, facial and body hair growth, rapid weight gain, hair loss and excessive acne. Her birth weight was 3650 gr, neuromotor development was normal.

The first reference (15 years):
- Short stature, amenorrhea, facial and body hair growth

At the time of diagnosis (16 years):
- Weight 50 kg (-0.7 SDS)
- Height 138 cm (-4.0 SDS)
- BMI 26.2 kg/m² (+1.7 SDS)
- Blood Pressure: 145/95 mmHg
- Prolactin (Hyperintense)
- A3 P5 N5 (primer amenorrhea)
- Akantosis nigricans
- Buffalo hump
- Hirsutism
- Purple striae
- Cushingoid appearance
- Piloere
- Central obesity

Laboratory findings:
- CBC, lipids
- LH, FSH, E2 17-OH-P
- Pelvic USG, BMD
- Free testosterone: 3.7 pg/ml
- ABPM - non-dipper HT (ACE inhibitor treatment)

After 9 months of Cabergolin treatment
- Cushing's disease regressed clinically and biochemically
  - Weight 44 kg (-1.8 SDS)
  - Height 143 cm (-2.73 SDS)
  - BMI 21.2 kg/m² (-0.07 SDS)
  - ACTH: 33 pg/ml (N: 10-46 pg/ml)
  - Cortisol: 7.32 µg/dl (N: 6.7-22.6 µg/dl)
  - Urinary free cortisol: 8.82 µg/day (N: 36-137 µg/day)

**ACTH hypersecretion and lateralization to the left was found by petrosal sinus sampling**

### Cushing's Disease

**First operation (16.5 years)**
- Endoscopic transnasal hypophysectomy (not successful)
- Morning ACTH: 60.4 pg/ml Cortisol: 20 µg/dl
- Midnight ACTH: 52.5 pg/ml Cortisol: 17.14 µg/dl

**Second operation (17 years)**
- Endoscopic transnasal left hemi-hypophysectomy
- Clinical findings not progress and the patient lost weight, markers of insulin resistance regressed
- Morning ACTH: 38.5 pg/ml Cortisol: 10.18 µg/dl
- Midnight ACTH: 37.9 pg/ml Cortisol: 8.41 µg/dl

**Urinary free cortisol: 70 µg/day (Normal)**

**PAThOLOGY:** no findings belonging to the adenoma

15 months after second operation
- Cushing's disease relapsed clinically and biochemically
- Morning ACTH: 69.9 pg/ml Cortisol: 17.7 µg/dl
- Midnight ACTH: 76.6 pg/ml Cortisol: 10.65 µg/dl

**Urinary free cortisol: 197.25 µg/day (N: 36-137 µg/day)**

**Conclusion:** Cabergoline is effective in the control of cortisol secretion in the treatment of recurrent Cushing's disease. Diagnosis and treatment of Cushing's disease in children are challenging.