


Cushing's disease examination

Cushing's disease: pituitary ACTH overproduction
Cushing's syndrome: excessive steroid production from any cause

Examination of a patient with Cushing's syndrome or steroids use.

1- WIPER 2- General appearance	Indications
steroid psychosis (ex: if the patient refused to do what you ask)	Affected people may develop psychiatric symptoms such as depression, mood swings and psychosis.
4-Inspection "Have the patient undress to the under pants and, if possible, standing-up"	
Note moon like facies , acne , hirsutism , central obesity , Facial plethora (red discoloration) and the thin limbs .	This is the characteristic fat distribution that occurs with steroid excess.
Bruising	Due to loss of perivascular supporting tissue protein catabolism
pigmentation "on the extensor surfaces"	because of melanocyte stimulating-Hormone [MSH]-like activity in the ACTH molecule.
Ask the patient to squat at this point to test for proximal myopathy	Due to mobilization of muscle tissue or excessive urinary potassium loss.
Look at the back for the buffalo hump .	due to fat deposition over the interscapular area
Gynecomastia in males <u>or</u> signs of virilisation in the female	Suggests adrenal carcinoma.
Palpate for bony tenderness of the vertebral bodies	due to crush fractures from osteoporosis (a steroid anti-vitamin D effect and increased urinary calcium excretion may be responsible in part for disruption of the bone matrix)
Inspect the abdomen for purple striae . "They may also be present near the axillae on the upper arms or on the inside of the thighs"	Due to weakening and disruption of collagen fibers in the dermis. 
5- Palpation	
Palpate for adrenal masses (rarely a large adrenal carcinoma will be palpable over the renal area). Palpate for hepatomegaly due to fat deposition or, rarely, to adrenal carcinoma deposits.	
Palpate for oedema in the lower limbs	Due to salt and water retention.

7- Examine the visual fields.	
for signs of a pituitary tumour, and the fundi for optic atrophy, papilledema and hypertensive or diabetic changes. Look for supraclavicular fat pads.	Compression of the optic chiasm usually results in bitemporal hemianopia
6- urinalysis and blood pressure	
Check the blood pressure	Hypertension due to salt and water retention (an aldosterone effect) and possibly to increased angiotensin secretion or a direct effect on blood vessels.
Test the urine for glucose.	(as steroids are diabetogenic ; this is due to an increase in hepatic gluconeogenesis and an anti-insulin effect on peripheral tissues)
Complications	
<ul style="list-style-type: none"> • osteoporosis • hypertension • Diabetes • Frequent or unusual infections • Loss of muscle mass and strength • Menstrual disorders • Erectile dysfunction • Cognitive disturbance (decrease concentration or psychosis) 	
Causes of cushing's syndrome	
<ul style="list-style-type: none"> • Exogenous administration of steroids or ACTH • Adrenal hyperplasia • Cushing disease:micro-macroadenoma pituitary hypothalamic axis dysfunction • ACTH producing adenoma (eg:small lung carcinoma, adrenal neoplasia) • Carcinoma(rare) 	
Differential diagnosis	
<ul style="list-style-type: none"> -cushing's syndrome -polycystic ovarian syndrome -hypothyroidism -metabolic syndrome 	