

ACROMEGLY

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Case study

History

- Male, 40 years old, Farmer, 3 children.

Symptoms

- Headache, vomiting, increased shoes size and rings. After 3 years- polyphagia, polyuria, polydypsia, diabetes and joint pain.

Past history and family history.

- No drugs, operation. No family history.

Diagnosis-General exam

Vital signs

- 37°C, BP- 160/90, regular pulse, fully conscious.

Head

- Elongated head, prominent supra-orbital ridges, enlarged nose, lips, ear, prognathism, separated teeth. Husky voice.

Neck

- By inspection, palpation

Diagnosis- Systemic examination

Skin

- Thickened, folds, sweaty, greasy skin.

Neuromuscular

- Myopathy and neuropathy.

Bone

- Crepitus in knee joint.

Investigation

- X-ray skull, heel, hand, joint.

Treatment

- Somatotatin analogue, GH antagonist, surgical removal of adenoma.

Diagnosis

- Acromegaly



Introduction

Acromegaly – serious hormonal disorder

Body produce too much growth hormone (GH)- produced by pituitary gland.

Too much growth hormone- tissues grow larger than normal lead to acromegaly.

Occurrence in children- gigantism(long bones of arms and legs)

Can affects all age group, all ethnic groups, strikes women and men equally and all region of the world.



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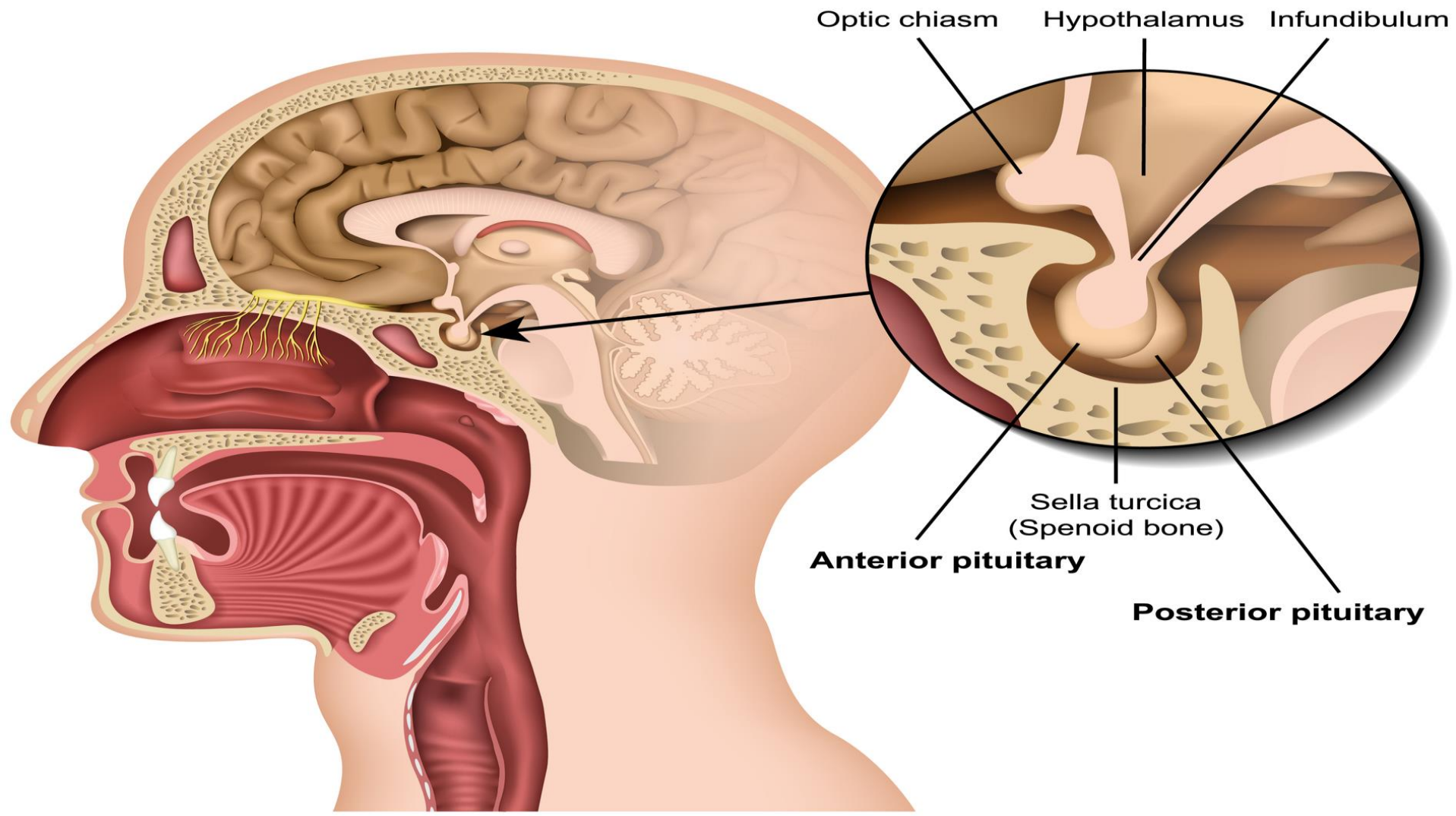


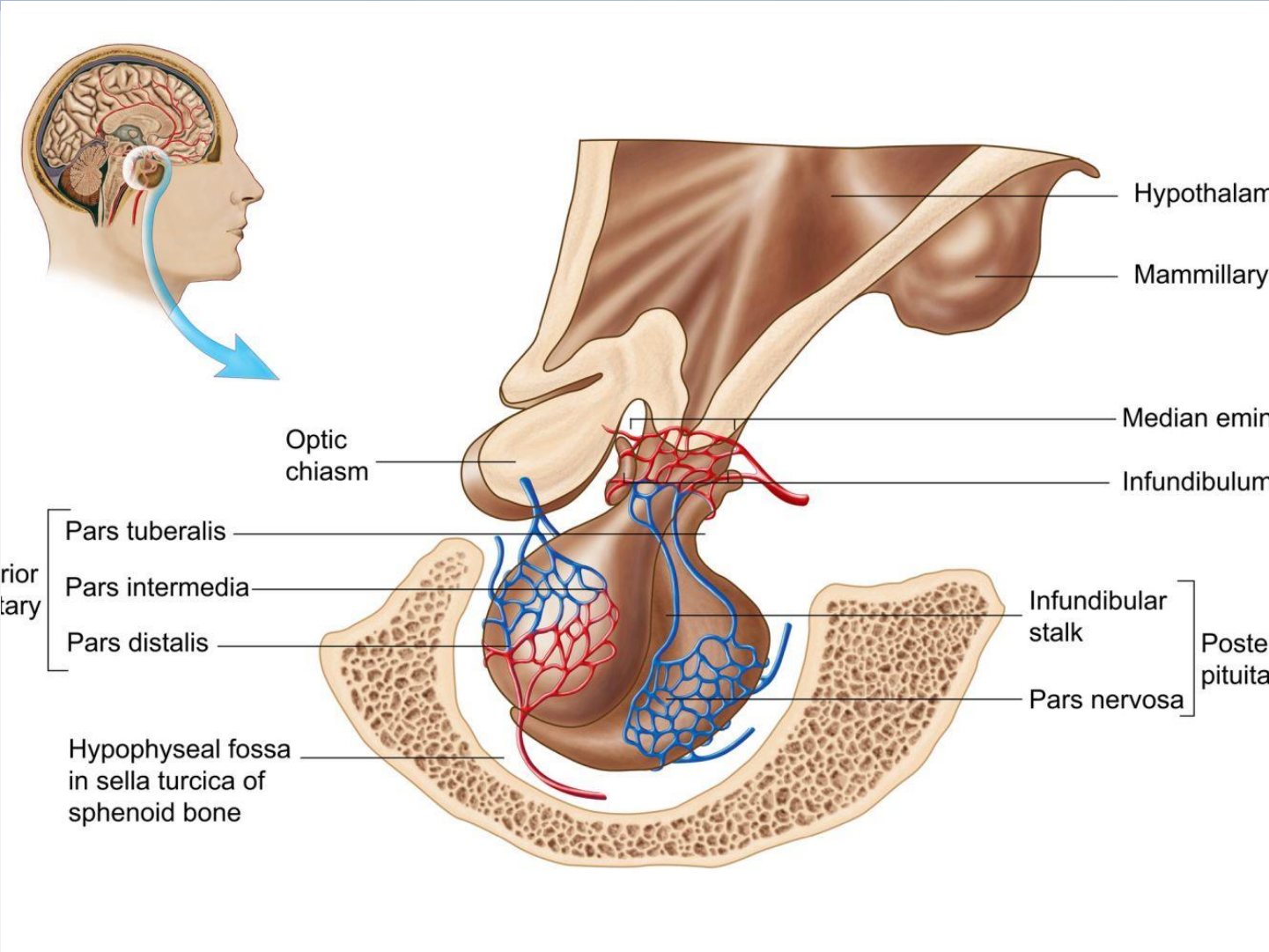
Frontal
bossing



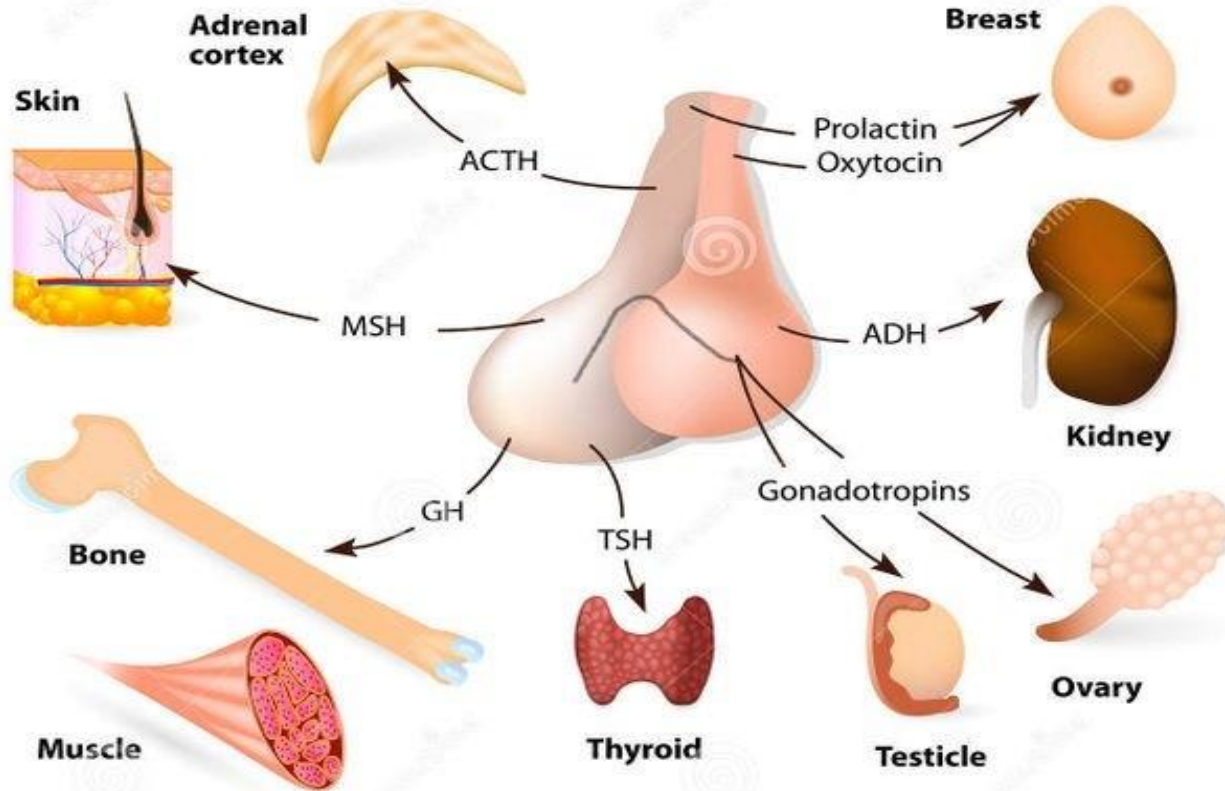
Pituitary Gland and Acromegaly

- The pituitary gland is about the size of a pea
- It is located at the base of the brain.
- It controls the production of hormones in most of endocrine glands.
- In almost all cases, it is caused by a benign (non-cancerous) tumour of the pituitary gland.





PITUITARY GLAND



Causes

Pituitary Tumors

Benign tumor
(micro- and
macro-adenoma)

Develop on their
own and are not
inherited

DNA is altered
causing mutation

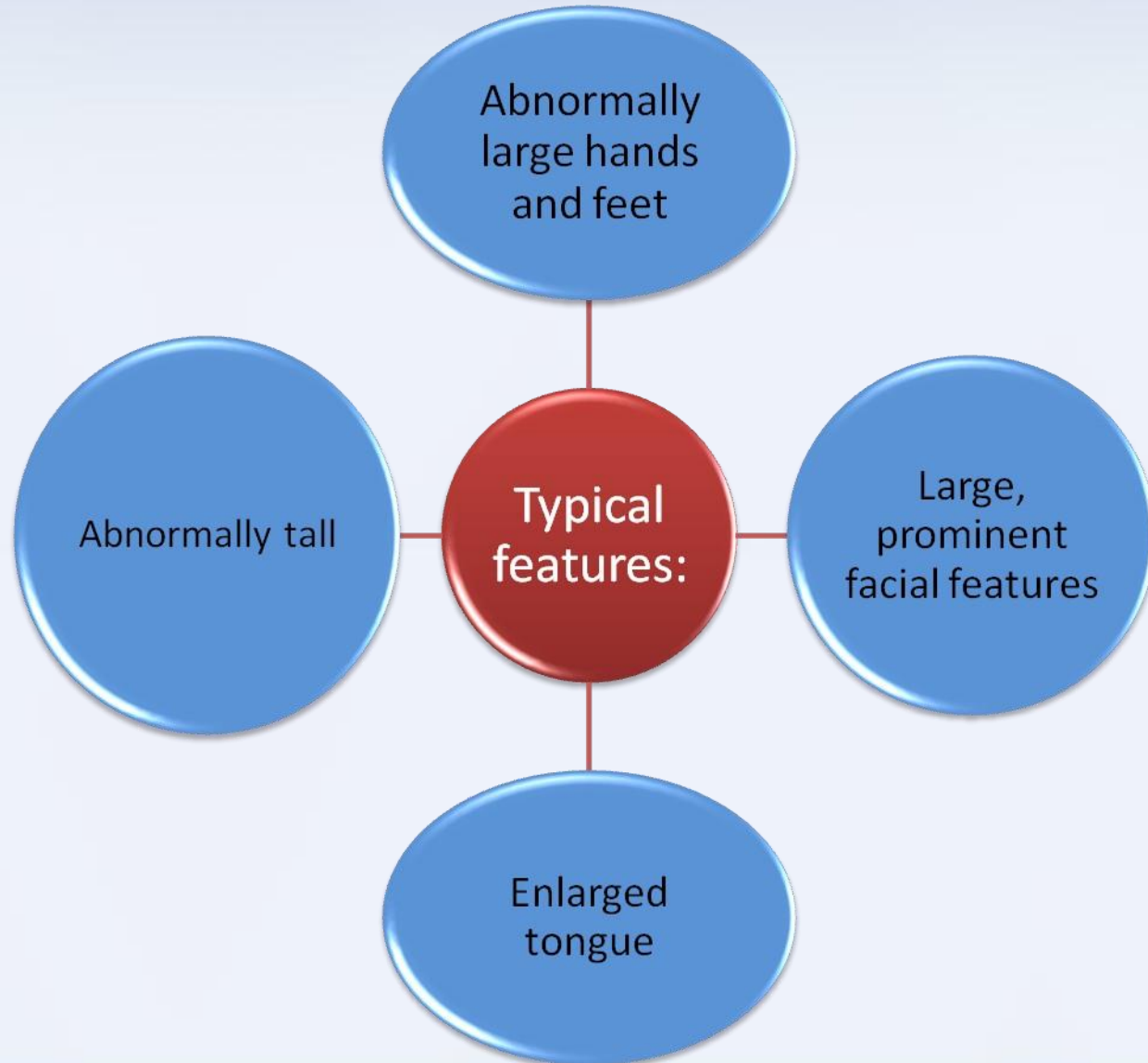
Non-Pituitary tumors

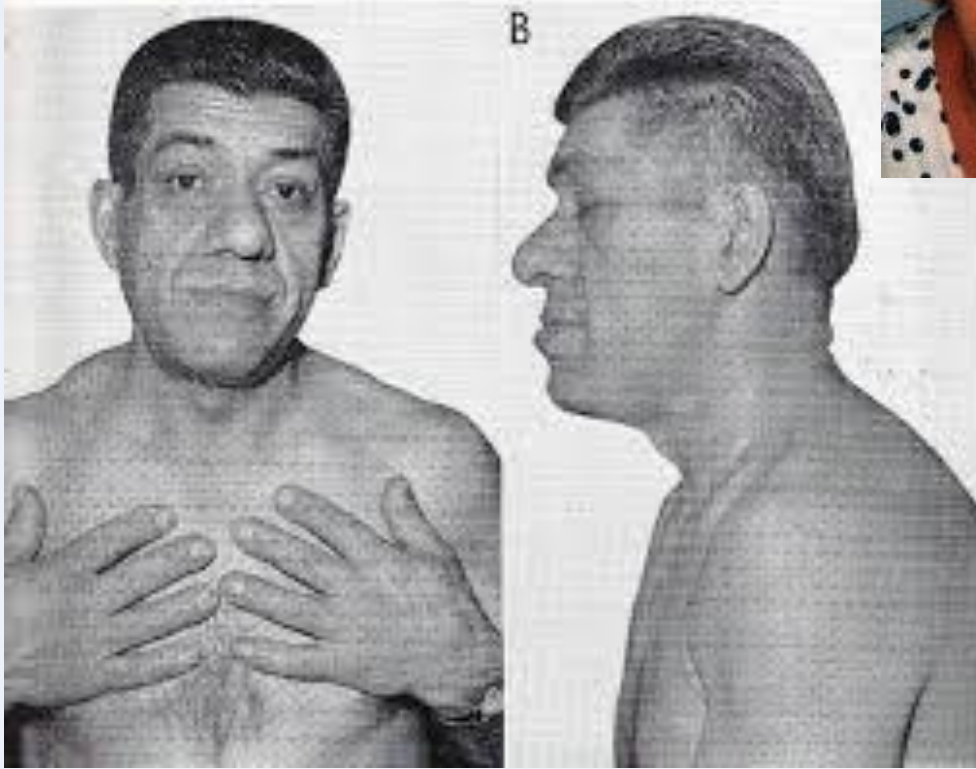
Very rare

Tumors of the
lungs, pancreas
and brain

Produce Growth
hormone or
Growth hormone
releasing hormone

Symptoms





- Joint aches
- Thick, coarse and oily skin
- Deepening of voice due to enlarged sinuses and vocal cords
- Sleep apnea
- Excessive sweating and body odour
- Fatigue and weakness
- Headaches
- Impaired vision
- Abnormal menstruation
- Impotence
- Widely spaced teeth
- Carpal tunnel syndrome
- Heavy sweating

Diagnostic Tests

1. Blood test

- Elevated Growth Hormone (GH) levels
- Elevated serum insulin like growth factor

2. Oral Glucose Tolerance test

- Ingestion of 75g of sugar causes GH reduction
- Normal patient: GH reduction occurs
- Acromegaly: GH reduction does not occur

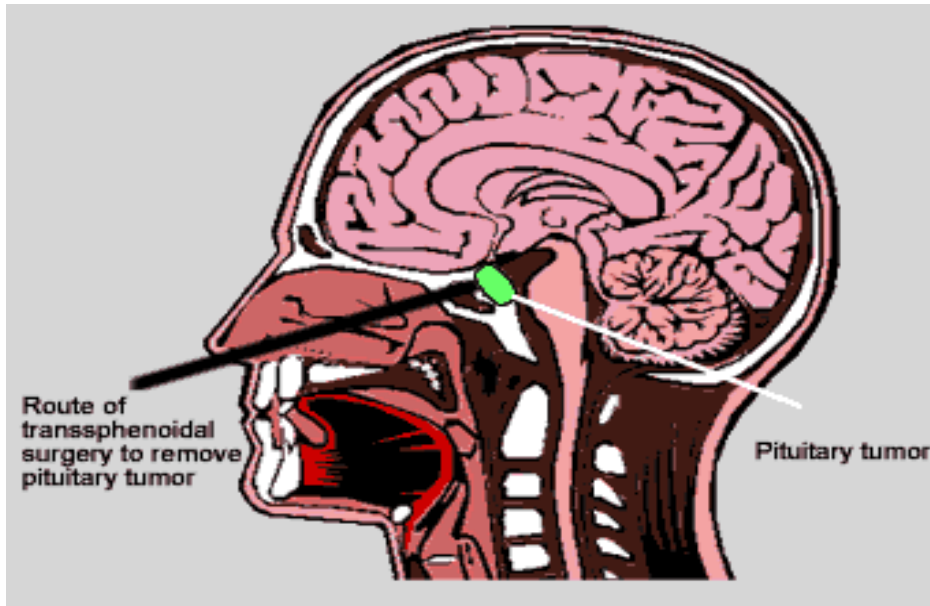
3. Visual Field Test

Confirmatory Tests

- Imaging test
 - Magnetic resonance Imaging or computed tomography
 - First, locates tumor at the pituitary gland
 - If it fails, the chest, abdomen or pelvis are searched for tumors
 - Growth hormone releasing hormone can be detected in non-pituitary tumors

Treatment

- Surgery :
 - Remove pituitary tumors - transsphenoidal surgery.



Medications

➤ Somatostatin analogues

- ❖ interfere with the excessive secretion of GH by the pituitary, produce rapid declines in GH levels.

➤ Dopamine agonists

- ❖ lower levels of GH and IGF-I or decrease tumor size.

➤ Growth hormone antagonist

- ❖ normalize IGF-I levels and relieve symptoms , but does not lower GH levels or reduce tumor size.

- Radiation :
 - When tumor cells remain after surgery.

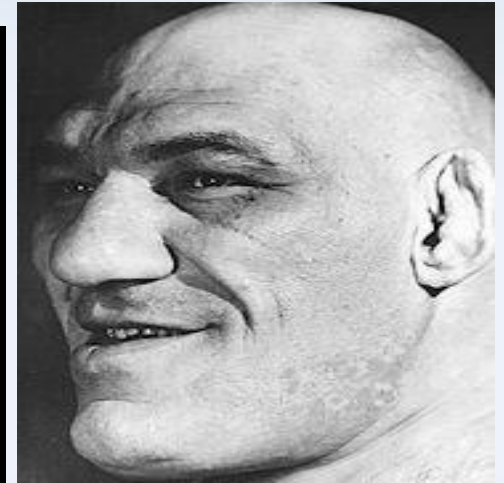


Prevention

- Early treatment may prevent complications.



Conclusion



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Thank You

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