Urogenital tumors

431 SURGERY TEAM

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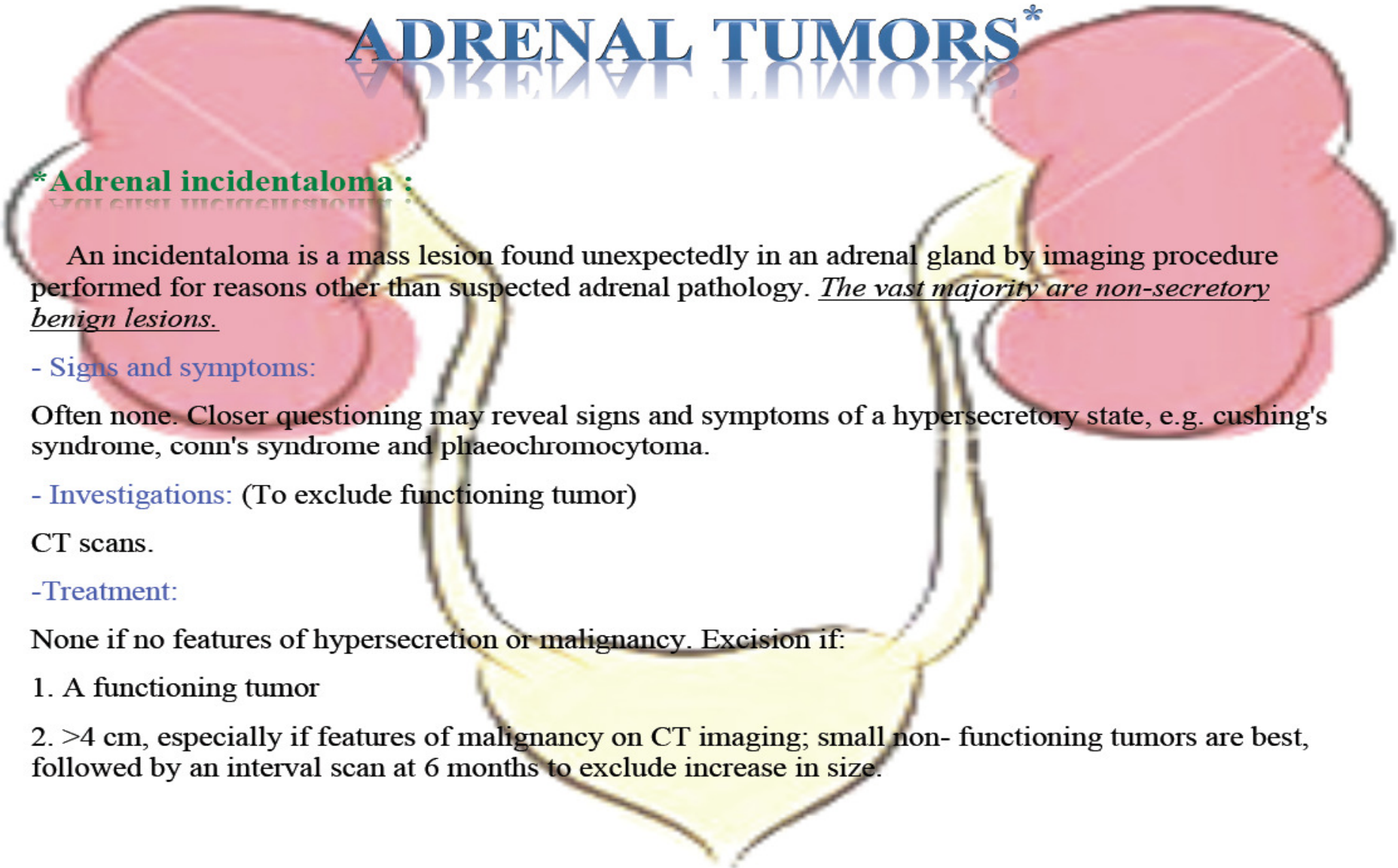
	General Information	Etiology	Clinical features /calcification	Investigation	Treatment / Prognosis
Renal Tumors	- ***Onchocytoma*** is the commonest benign tumor. - Most common kidney cancer is ***renal cell carcinoma.*** - The commonest renal cell carcinoma histological subtype is ***clear cell carcinoma.*** - Renal cell carcinomas arise from the ***proximal tubule cells.*** - Metastases to extend into ***renal vein*** and ***inferior vena*** cava (to involve a ***heart*** and a ***lung***). ***"Canon Ball"metastases .***	- Increased incidence seen in **Von Hippel-Lindau syndrome :** - Mutation of short arm of chromosome 3 , cause CNS hemangioblastomas, pheochromocytomas , pancreas and kidney cysts, renal cell carcinoma.	- Usually ***incidental finding*** , But can present with Gross hematuria , Loin pain and Palpable mass. - Associated with **Paraneoplastic syndrome:** • Pyrexia • ADH "Hypertension" • EPO "Polycythemia" • PTH "Hypercalcemia" • Non-metastatic hepatic dysfunction called Stauffer's syndrome, characterized by elevated liver enzymes - All treated by surgical removal of kidney tumor EXCEPT hypocalcaemia witch need medication .	- ***Ultrasound*** (to confirm). - ***CT scanning*** (to see a metastases and assess staging) ***Echocardiogram*** * Bilateral renal tumors, you have to think of familial syndromes like VHL. * Grading system of renal cancer is called: Fuhrman system	- Usually treated by ***Radical nephrectomy*** (remove Kidne and adjacent tissue (adrenal, perinephric fat will excised . - The procedure involve transabdominal or loin incision. - Renal vein ligated early to reduce tumor propagation - Radiotherapy and chemotherapy have NO role, Except in bone metastasis to reduce pain . - ***Immunotherapy*** : Not curable but it can prolong hi life .
Bladder Tumor	- ***90% transitional cell carcinomas (TCC)*** - 5% are squamous carcinoma (*associated with Schistosoma haematobium* - 2% are adenocarcinomas (*associated with congenital fistulas*) - Staged according to ***depth of tumor invasion*** of "muscularis propria" - graded by taking ***Biopsy***.	- **Occupational exposure** and Chemical implicated aniline dyes, chlorinated hydrocarbons - ***Cigarette smoking*** - Analgesic abuse e.g. phenacitin - Pelvic irradiation e.g. carcinoma of the cervix ***- Schistosoma haematobium***	***TCCs are two types :*** * ***Superficial*** : well differentiated (good prognosis) *present above the muscle layer* , 20% progress to muscle invasion. ***higher recurrence rate*** * ***Deep"Invasive"*** : poor differentiated (poor prognosis) *high-grade and muscle invasive* ,50% have muscle invasion at time of presentation. ***Clinical features :*** present with ***Gross, painless and terminal hematuria*** and sometime ***pyuria.***	✓ ***Urinalysis.*** ✓ ***Ultrasound.*** ✓ ***KUB X-Ray*** ✓ ***Cystoscopy.*** ✓ ***Urine Cytology IVU***	* ***Carcinoma-in-situ*** (positiv cytology) : Immunotherapy, fails need *Radical cystectom* * ***Superficial TCC*** : *Transurethral resection* prophylactic *Chemotherapy* high rick for recurrence . *Immunotherapy (BCG)* ***Invasive TCC :*** *Radical cystectomy* and adjuvant *chemotherapy* may have a role. Urinary diversion achieved t - Ileal conduit (incontinent) - Continent cutaneous reserv - Orthotopic neobladder (continent)

	General Information	Clinical features /Classification	Investigation	Treatment / Prognosis
Prostate Tumor	- *Commonest malignancy of male urogenital tract.* - Found at post-mortem in 50% of men older than 80 years. - *The tumors are adenocarcinomas arise in the peripheral zone of the glands .* - *Lymphatic spread* is more common than Hematogenous spread which occur to axial skeleton . - Tumors are graded by *Gleeson classification* And staged by *Multiparametric MRI*	• Majority picked up by *Screening* • Can present with *bone pain* (presence of metastases), cord compression or *leucoerythroblastic anemia* or even by *renal failure due to obstruction.*	*Advanced tumor diagnosided by rectal Examination "hard nodule"* *Multiparametric MRI* "use to know the tumor stage". *PSA* (prostate specific antigen: produced by prostatic epithelial cells . 4 ng/ml is the upper limit of normal. · *>10 ng/ml is highly suggestive of prostatic carcinoma.* · Can be raised in *BPH.* · *Useful marker for monitoring response to treatment*	- Treatment depends on stage of disease, patient's age - *Local disease* : 1- Observation *(old men ≥ 80 with localized disease).* 2-Radical radiotherapy *(prostate cancer is radiosensitive).* 3-Radical prostatectomy. - *Locally advanced disease* : 1-Radical radiotherapy . 2-Hormonal therapy . - *Metastatic disease* : Hormonal therapy. ** HORMONAL THERAPY :* *Hormonal therapy involves androgen depletion .* Androgen depletion can be achieved by: ▪ Bilateral orchidectomy "old aged group". ▪ LHRH agonists (e.g. goseraline). ▪ Anti-androgens (e.g. cyproterone acetate, flutamide, biclutamide). ▪ Complete androgen blockade.
Testicular Tumor	** Commonest urogenital malignancy in young men.* * Highest incidence in *Caucasians* in *northern Europe and USA* ** High survival* rate is > 95% 5-year . * *Risk factors include cryptorchidism, testicular maldescent, Klinefelter's syndrome, and testicular torsion .* *Testicular tumor staged by *thoraco-abdominal CT scanning*	**Ipsilateral painless testicular swelling* Has two types : *- Seminomas (~50%)* : *Radiosensitive* - *Non-Seminoma (~50%)* : *Radio-resistant :* -Teratomas -Yolk sac tumors -Embryonal -Mixed Germ cell tumor	Diagnosis can often be confirmed by *testicular ultrasound .* *Tumor markers* are useful in staging and assessing response to treatment . 1- *Alpha-fetoprotein (α-FP)* : Produced by yolk sac Tumor 2- *Beta-human chorionic gonadotropin (β-hCG):* Produced by *trophoblastic elements* Elevated levels seen in both *teratomas and seminoma* *3-LDH*	***SEMINOMA :*** . High cure rate for all stages of seminoma . · *Stage I and II* disease treated by *inguinal orchidectomy* + (*Radiotherapy* to *ipsilateral abdominal and pelvic nodes* ('Dog leg') or *Surveillance*) · *Stage IIC and above* treated with *chemotherapy* ***NON-SEMINOMA :*** · *Stage I disease* treated by *orchidectomy* and *surveillance* . ·* *Chemotherapy* (BEP = Bleomycin, Etopiside, Cisplatin) given to: o Stage I patients who relapse o Metastatic disease at presentation

ADRENAL TUMORS*



*Adrenal incidentaloma :

An incidentaloma is a mass lesion found unexpectedly in an adrenal gland by imaging procedure performed for reasons other than suspected adrenal pathology. *The vast majority are non-secretory benign lesions.*

- Signs and symptoms:

Often none. Closer questioning may reveal signs and symptoms of a hypersecretory state, e.g. cushing's syndrome, conn's syndrome and phaeochromocytoma.

- Investigations: (To exclude functioning tumor)

CT scans.

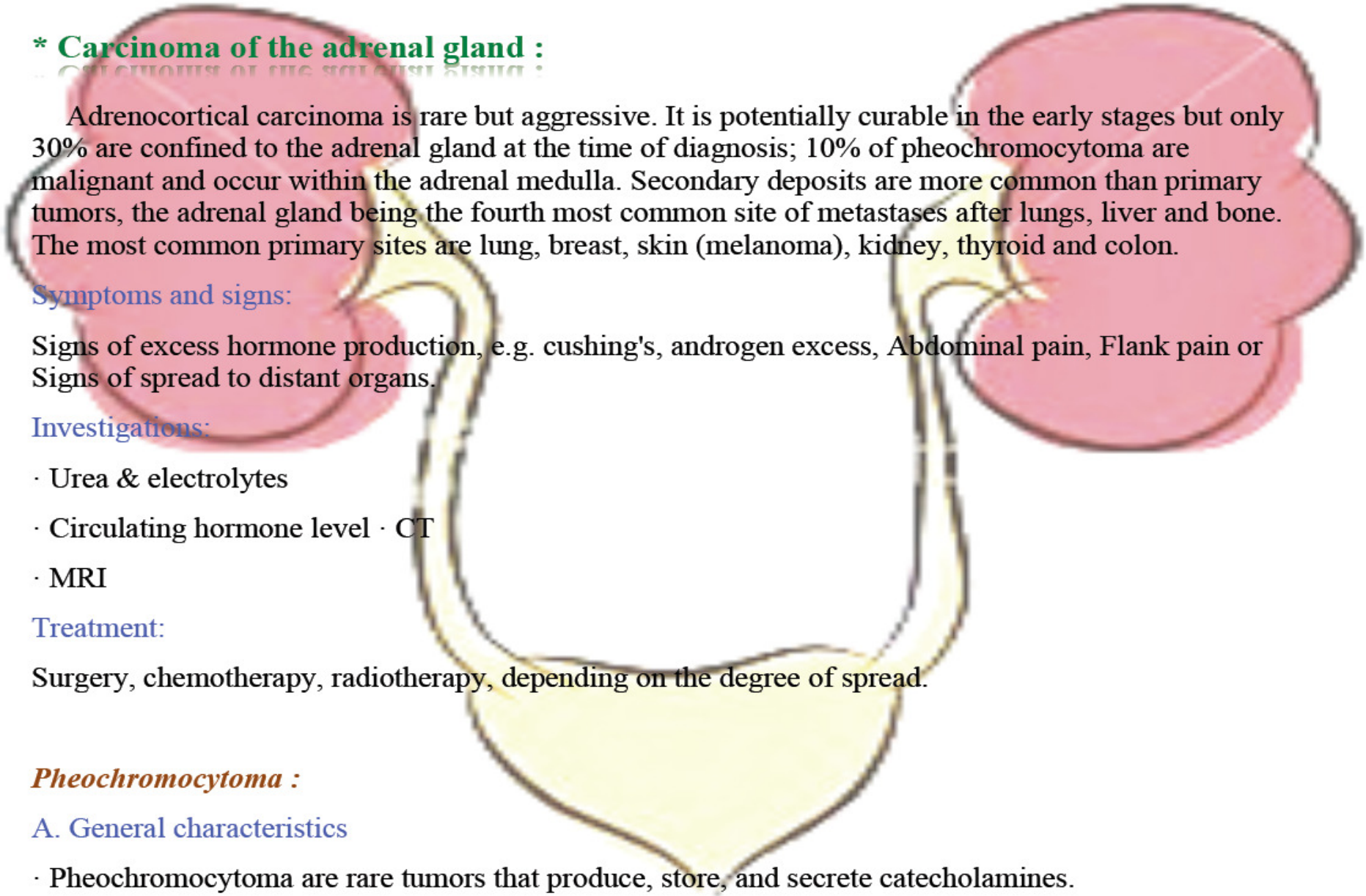
-Treatment:

None if no features of hypersecretion or malignancy. Excision if:

1. A functioning tumor

2. >4 cm, especially if features of malignancy on CT imaging; small non- functioning tumors are best, followed by an interval scan at 6 months to exclude increase in size.

*** All the adrenal tumor subject do not mention in lecture and it is taken from teem 430.**



* Carcinoma of the adrenal gland :

Adrenocortical carcinoma is rare but aggressive. It is potentially curable in the early stages but only 30% are confined to the adrenal gland at the time of diagnosis; 10% of pheochromocytoma are malignant and occur within the adrenal medulla. Secondary deposits are more common than primary tumors, the adrenal gland being the fourth most common site of metastases after lungs, liver and bone. The most common primary sites are lung, breast, skin (melanoma), kidney, thyroid and colon.

Symptoms and signs:

Signs of excess hormone production, e.g. cushing's, androgen excess, Abdominal pain, Flank pain or Signs of spread to distant organs.

Investigations:

· Urea & electrolytes

· Circulating hormone level · CT

· MRI

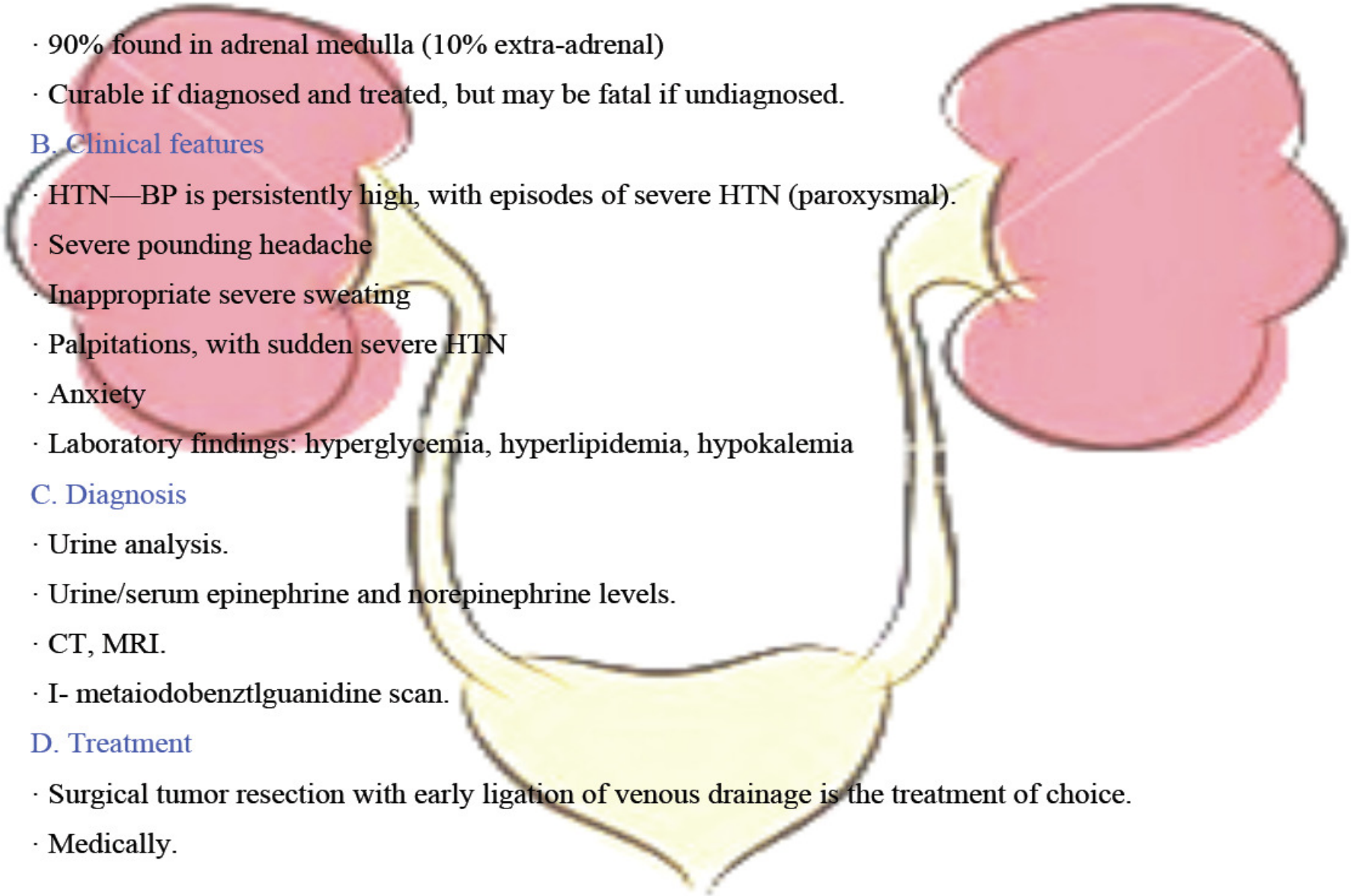
Treatment:

Surgery, chemotherapy, radiotherapy, depending on the degree of spread.

Pheochromocytoma :

A. General characteristics

· Pheochromocytoma are rare tumors that produce, store, and secrete catecholamines.



· 90% found in adrenal medulla (10% extra-adrenal)

· Curable if diagnosed and treated, but may be fatal if undiagnosed.

B. Clinical features

· HTN—BP is persistently high, with episodes of severe HTN (paroxysmal).

· Severe pounding headache

· Inappropriate severe sweating

· Palpitations, with sudden severe HTN

· Anxiety

· Laboratory findings: hyperglycemia, hyperlipidemia, hypokalemia

C. Diagnosis

· Urine analysis.

· Urine/serum epinephrine and norepinephrine levels.

· CT, MRI.

· I- metaiodobenztlguanidine scan.

D. Treatment

· Surgical tumor resection with early ligation of venous drainage is the treatment of choice.

· Medically.