

# CYSTS

## DEFINITIONS

**CYST:** Is a swelling, consisting of pathological sac, filled with fluid and bound by a wall. The fluid is often clear, serous and colourless, but may be turbid, or contain cholesterol crystals. It may have consistency like toothpaste due to secretion of desquamated cells as in epidermoid and dermoid cysts.

## TYPES

- **TRUE CYST:** The wall of the cyst is lined with cells of epithelial origin (epithelium or endothelium)
- **FALSE CYST:** The wall of the cyst is lined by fibrous tissue. These are usually inflammatory or degenerative in origin. E.g. dental or radicular cysts, encysted pleural effusions, pancreatic pseudocyst, cystic degeneration in the center of tumors due to necrosis or hemorrhage, and brain cysts.

## CLASSIFICATION

### 1. CONGENITAL:

- a) Persistence of normal vestigial elements; Thyroglossal cyst, urachal cyst and hydatid of Morgagni
- b) Sequestration dermoids; External angular dermoid, branchial cyst.
- c) Ectopia of various tissues; Dermoid cyst and enterogenous cysts.
- d) Failure of connection of tubular elements; Polycystic kidneys.
- e) Hamartomas; Cystic hygroma, lymphatic cysts of the greater omentum.

### 2. ACQUIRED:

- a) **Retention cysts;** retention cyst of the breast, parotid gland and mucous cyst of the mouth.
- b) **Implantation cyst;** implantation epidermoid cyst.
- c) **Distension cyst;** Thyroid cysts, ovarian cysts.
- d) **Exudative cysts;** Pseudocyst of the pancreas
- e) **Traumatic cysts;** resulting from hematoma
- f) **Degenerative cysts;** in the brain, inside tumours and uterine fibroids.
- g) **Neoplastic cysts;** Cystic tumors like cystadenoma and cystic teratoma.
- h) **Parasitic cysts;** Hydatid cysts

## RETENSION CYSTS:

Are due to accumulation of secretion of a gland following obstruction of a duct, e.g. in the breast, pancreas, parotid, epididymis and Bartholin glands. Epidermoid (sebaceous) cyst starts by obstruction of the duct of the sebaceous gland but is followed by downgrowth and accumulation of desquamated epidermal cells turning it into epidermoid cyst.

## IMPLANTATION CYSTS:

Arise from squamous epithelium which have been driven beneath the skin by penetrating wound, clinically occur in the fingers of women sewing.

## DISTENSION CYSTS:

Occur from dilatation of the accini as in thyroid gland, or in the ovaries from dilatation of the ovarian follicles, other examples are lymphatic cysts and cystic hygromas.

## **EXUDATIVE CYSTS:**

They are false cysts that result from exudation of fluid into an anatomical space already lined by epithelium, e.g. hydrocele and bursa. But when a collection of exudates becomes encysted, it is a false cyst as in pseudocyst of pancreas (collection of fluid in the lesser sac).

## **TRAUMATIC CYSTS:**

A hematoma may resolve into a straw or brown colored fluid, it will be lined by endothelium. Aspiration of the cyst is of only temporary benefit and cure depends on complete excision of the epithelial lining.

## **DEGENERATIVE CYSTS:**

They are false cysts. Fluid may collect in the center of a tumor due to hemorrhage or necrosis (cystic degeneration), this also occur in the brain due to ischemia and apoplectic cyst is formed.

## **CLINICAL FEATURES**

The clinical features and the effects of the cyst depend on the site and size of the cyst. It presents in several ways:

- The patient may presents with a mass, as in breast cysts, thyroid cysts.
- Pain may be the presenting symptom, which is often secondary to infection of the cyst, hemorrhage inside the cyst, torsion of the cyst or rupture of the cyst.
- Pressure symptoms on adjacent structures, e.g. thyroid cyst causing difficulty in breathing or swallowing, a large ovarian cyst pressing the pelvic veins causing varicose veins of the lower limbs, choledochal cyst, hydatid cyst pressing the common bile duct causing obstructive jaundice.

On examination the cyst is spherical in shape, smooth surface, fluctuation test is usually positive if the cyst is not under too much tension when it feels like a solid mass. Transillumination is positive when it contains clear serous fluid.

## **COMPLICATIONS**

1. **Infection:** The cyst becomes painful, tense, and adherent to the surrounding structures and may end in abscess formation.
2. **Hemorrhage:** It occurs suddenly as in thyroid cysts, resulting in sudden pain and increase in size.
3. **Torsion:** It occurs when the cyst is attached to the surrounding structures by a pedicle as in ovarian dermoid cyst.
4. **Rupture:** As in rupture ovarian cyst
5. **Calcification:** It follows hemorrhage and infection, and may be the result of reaction to the parasite, e.g. hydatid cyst.

## **INVESTIGATIONS**

When the cyst is superficial, the diagnosis is fairly obvious as in epidermoid (sebaceous) cyst and thyroglossal cyst. Sometimes diagnostic needle aspiration is done to confirm the cystic nature of the lesion. In deep seated abdominal or thoracic cysts, ultrasonography, CT scan and MRI is often required to help make diagnosis.