Calcinosis Cutis

There are four forms of calcinosis cutis: metastatic calcinosis cutis, dystrophic calcinosis cutis, idiopathic calcinosis cutis, and subepidermal calcified nodule.
Metastatic Calcinosis Cutis

Metastatic calcification develops as the result of hypercalcemia or hyperphosphatemia. Hypercalcemia may result from (a) malignant tumor; (b) primary hyperparathyroidism; (c) familial hypophosphatemic rickets; (d) hyperparathyroidism following parathyroid hormone administration; or (e) recurrent hyperparathyroidism in peritoneal dialysis patients. Hyperphosphatemia may result from (a) malnutrition; (b) chronic dialysis; (c) renal failure; (d) vitamin D toxicity; or (e) feline hyperphosphatemic osteodystrophy. In patients with metastatic calcification, it is often difficult to determine whether hypercalcemia or hyperphosphatemia is the more important factor in the development of calcification.
and phosphorus from bone. The demineralization of bone causes both osteodystrophy and metastatic calcification.
Metastatic calcification most commonly affects the media of the arteries and the kidneys. In addition, other visceral organs, such as the myocardium, the stomach, and the lungs, may be involved. Metastatic calcification in the subcutaneous tissue is occasionally observed in association with renal hyperparathyroidism, in uremia, in hypervitaminosis D, and as the result of excessive intake of milk and alkali but rarely in primary hyperparathyroidism. Palpable, hard nodules, occasionally of considerable size, are located mainly in the vicinity of the large joints. With an increase in size, the nodules may become fluctuant.
Calciphylaxis is a life-threatening condition in which there is progressive calcification of small-

Clinically, the lesions present as a panniculitis or vasculitis. Bullae, ulcerations, or a livedo reticularis-like
Instances of cutaneous metastatic calcinosis. Most reports have concerned patients with renal hyperparathyroidism, but these presenting as plaques or nodules on the skin that can be expressed as a granular, white substance.

Mural calcification of arteries and arterioles in the deep dermis or subcutaneous tissue occurs rarely in primary hyperparathyroidism but somewhat more frequently in secondary hyperparathyroidism subsequent to renal disease.
Calcium deposits are recognized easily in histologic sections, because they stain deep blue with H&E. They stain black with silver stains. This is in contrast to calcium hydroxyapatite, which stains bluish-purple with H&E and red with Congo red stain. Calcium deposits may evoke a foreign body reaction; thus, giant cells, an inflammatory infiltrate, and fibrosis may be present around them.
In areas of infarctive necrosis, as a result of calcification of dermal or subcutaneous arteries or arterioles...

The histologic changes in calciphylaxis include calcium deposits in the subcutis, chiefly within the walls of...
It is particularly important that these findings be recognized in order that appropriate therapy, which often includes parathyroidectomy, might be instituted immediately.
Dystrophic Calcinosis Cutis

In dystrophic calcinosis cutis, the calcium is deposited in previously damaged tissue. The values for serum
*Calcinosis universalis* occurs as a rule in patients with dermatomyositis, but exceptionally it has also been observed in patients with systemic sclerosis. In dermatomyositis, if the patient survives, the nodules of dystrophic calcinosis gradually resolve.

*Calcinosis circumscripta*
Calcinosis Cutis = اﻠﺠﻠدﻲ اﻠﻜﻠاﺲ

occurs as a rule in patients with systemic scleroderma; rarely, however, it may be...
Lupus erythematosus is only rarely associated with dystrophic calcinosis cutis. In addition to occurring in subcutaneous fat necrosis of the newborn and, rarely, in the subcutaneous nodules occurring in Ehlers-Danlos disease.

*Histopathology.*

As in metastatic calcinosis cutis, the calcium in dystrophic calcinosis cutis usually
Idiopathic Calcinosis Cutis

Even though the underlying connective tissue disease in some instances of dystrophic calcinosis cutis may...

One entity is regarded as a special manifestation of idiopathic calcinosis cutis: tumoral calcinosis. It cons...
Histopathology.

Tumoral calcinosis shows in the subcutaneous tissue large masses of calcium salts...
Pathogenesis

Two authors have studied lesions of idiopathic calcinosis cutis by electron microscopy (160, 161). They agree that the apatite crystals grow within collagen fibrils and subsequently extend into the ground substance as the crystals grow (161).
Idiopathic Calcinosis of the Scrotum

Idiopathic calcinosis of the scrotum consists of multiple asymptomatic nodules of the scrotal skin. The nodules begin to increase in size and number, and sometimes break down to discharge their chalky contents.
Histopathology
At one time, the accepted view was that some of the calcific masses in calcinosis
according to this view, calcinosis of the scrotum represents the end stage of dystrophic calcification of scrotal...
Subepidermal Calcified Nodule

In subepidermal calcified nodule, also referred to as cutaneous calculi, usually a single small, raised, hard nodule is present. Occasionally, however, there are two or three nodules, and in some patients, a nodule is present at birth or even innumerable nodules. Most patients are children; however, in some patients, a nodule is present at birth or even innumerable nodules.
does not appear until adulthood. In most instances, the surface of the nodule is verrucous, but it may be smooth. The most common location of the nodule is the face.

Pathogenesis. The primary event seems to be the formation of large, homogeneous masses that undergo calcification and break up into numerous calcified globules. The origin of the homogeneous masses is obscure. It is not likely that they originate from a specific preexisting structure, such as sweat ducts or nevus cells as has been assumed.