

and bursae of hands and arms). Repeated external trauma (Biebl; Sauerbruch; Winkler; and Dietrich) and a single, acute trauma may lead to the development of an inflammatory, resorptive xanthogranuloma (knee joint) (Kisse; and Bonn). These yellow colored hyperplasias contain plaques of the large xanthoma cells with their honeycomb-like cytoplasm filled with fine lipid droplets and granules. These cells often form sheaths around blood vessels. There are in addition strands of fibroblasts and multinucleated giant cells of the foreign body (nuclei arranged in a wreath) and the Touton type (nuclei placed radially in the longitudinal axis and surrounded by a fringe of granules). The foam cells sometimes show loss of cell contours, which results in a merging of the cellular clumps into a larger lipid mass containing cholesterol crystals and leaving the typical slit-like defects in the tissue following its extraction with alcohol. Hyalinization of the connective tissue strands and of the walls of the blood vessels as well as small lymphocytic infiltrations are often observed. The xanthosarcomas are usually local lesions, which do not recur after removal, grow expansively, and do not produce metastases (Oberndorfer). Occasionally infiltrative growth and secondary deposits are noted, indicating the transition from a state of inflammatory hyperplasia into that of a neoplastic hyperplasia (Pack).

6. JOINT CAPSULES AND TENDON SHEATHS

Capsules of joints and sheaths of tendons form the walls of cavities into which these membranes secrete a sero-mucinoid liquid. They consist of a fibrous, outer layer and a loose, inner, synovial layer, composed of fibroblasts embedded in an edematous matrix containing a few fat cells and blood and lymph vessels. Accidental and occupational trauma acting on these tissues may give rise to several types of pseudotumors.

A. GANGLIONS OF TENDON SHEATHS

Ganglions are cystic formations filled with a clear, viscous material, found most frequently on the dorsal aspect of the wrist and less often on the dorsum of the knee, ankle, foot, and palmar surface of the wrist. They represent pseudotumors of the tendon sheaths most commonly observed in people who have a constant occupational motion of the wrist, hands, or feet, such as typists, pianists, and washerwomen. They rarely follow a single, acute accidental trauma (injury or strain) to the tendon sheaths (Brunschwig; Bearn; Payr; and Gross). Their etiologic relation to chronic occupational trauma is supported by the fact that there exists a likelihood of repeated ganglion formation for persons affected by this condition, unless any further strain and chronic abuse of the tendon sheaths is eliminated by a change of occupation.

The pathogenesis of these cysts is still controversial. Some investigators maintain that they are the result of a herniation of the synovial membrane