Pityriasis capitis (“dandruff”) occurs in combination with alopecia most frequently in men after puberty. Fine, dispersed, grayish-white scaling occurs constantly on the scalp. The hair is thin and the natural gloss is not present. Itching and reddening of the scalp often occur. The treatments are the same as for seborrheic dermatitis.

Patients with trichotillomania, who tend to be in their late childhood, have an uncontrollable compulsion to pull out their own hair. The patients may deny this hair-pulling behavior. Vaguely circumscribed, irregular-shaped, incomplete alopecia is present. Both short and broken remaining hairs and newly produced hairs are observed in the same alopecia, which is within reach of the hand, often on the frontal and temporal region of the head on the right side. The patient’s psychological background, personality and domestic environment may trigger trichotillomania; cooperation with a psychiatrist is necessary for treatment.

As a result of scarring caused by injury, burn, or discoid lupus erythematosus. The hair follicles are irreversibly destroyed, leading to alopecia. Surgical treatment is necessary.

D. Disorders of nails

a. Color change of nail plates

1. Melanonychia

Melanonychia may be caused by increased number of nail matrix melanocytes (e.g., from nevocellular nevus, inflammation, melanocytes activated by pressure), fungal infections, malignant melanoma, Behçet’s disease, subungual hemorrhage, Addison’s disease or drugs (e.g., 5-FU, bleomycin, hydroxyurea). When the skin of the nail fold region is also affected, it is called Hutchinson’s sign and has a high likelihood of indicating a malignant melanoma (Fig. 19.16).

Approximately 20% of ethnic Japanese and up to 96% of ethnic Africans have pigmented streaks.

2. Yellow nail

It is caused by nutritional deficiency or infection of nails, or by aurantiasis cutis, or jaundice. When yellowing of the nails occurs...
in patients with lymphoma and chronic pulmonary disease, it is called yellow nail syndrome, which may be induced by D-penicillamine or tetracyclines.

3. Green nail

This opportunistic infection is caused by *Pseudomonas aeruginosa* infection and tends to accompany *tinea unguium* and candida onychomycosis (Fig. 19.17).

4. White nail

**Synonym: Leukonychia**

These white punctate patches may be caused in nails by localized incomplete keratinization from injury (Fig. 19.18). They are harmless. White nail accompanies hypoalbuminemia as in nephrosis and cirrhosis, diabetes, anemia, systemic sclerosis, arsenic poisoning, onychomycosis and onycholysis.

5. Subungual purpura

Punctate or linear purpura results from bleeding caused by injury, Osler’s disease, or subacute endocarditis.

b. Abnormal formation of nail

1. Clubbing

This disorder is also called clubbed finger or hippocratic nail. The entire nail plate bulges like the glass face of a watch. The distal fingers and toes enlarge in drumstick shape (Fig. 19.19). Clubbing is caused by mucopolysaccharide deposition in the soft tissue of the distal fingers and toes. It occurs in chronic cardiopulmonary diseases (pneumonectasia, lung cancer, bronchietasis, congenital heart disease), hyperthyrea, ulcerative colitis and Crohn’s disease. It may appear as a symptom of pachydermoperiostosis running in families (Chapter 18).

2. Spoon nail

**Synonym: Koilonychia**

Spoon nail is associated with iron-deficiency anemia, lichen planus, psoriasis, fungal infection, extrinsic injury and chemical substances. The nail plates become thin, with spoon-like concavity with raised edges. Fingers are more severely affected than toes. It may be seen in otherwise normal infants.
3. **Onycholysis**

The nail plate detaches from the nail bed at the periungual area. Desquamation occurs, but nails do not fall out. The causes may be injury, nail polish, or inflammation in the periungual skin of the nail plate region caused by detergent, localized diseases including candida onychomycosis, systemic diseases such as hyperthyroidism, peripheral circulatory failure, or drug-induced disease.

4. **Onychomadesis, Nail shedding**

The nail plate detaches at proximal sites of the nail root, which is the end opposite that in onycholysis desquamation, and the nail exfoliates. It may occur sporadically or be caused by injury, peri-onychia, psoriasis, lichen planus, syphilis or erythroderma.

5. **Pachyonychia**

The nail plate thickens, or hyperkeratosis occurs under it. Thickening of the nail is also caused by hindered growth.

6. **Longitudinal groove**

Linear grooves run vertically in the nail plate. It is seen as a senile change. It may progress to onychorrhexis, a condition in which nails tend to split longitudinally. Longitudinal grooves are caused by injury, eczema, systemic scleroderma, and anemia. When the nail is thickened and curved, it is called onychogryphosis.

7. **Transverse groove**

Grooves cross in the nail as a result of impaired growth of nail caused by failure in the nail matrix. The width of the grooves shows the period of a disease, and the depth shows the degree of impairment. By measuring the position of the transverse grooves, it is possible to date previous illness. It occurs in infectious diseases including typhus and hemolytic streptococcal infection (scarlet fever), diabetes, severe blood loss, drug-induced diseases, zinc deficiency and cases of periungual injury or infection. Transverse grooves caused by an intrinsic factor are called Beau’s lines.

8. **Nail pits**

Multiple, small, needle-like indentations occur on the nail plate. It is caused by psoriasis and alopecia areata, or it may occur under normal conditions.

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**Fig. 19.19 Clubbing.**
The entire nail plate bulges like the glass face of a watch. The distal fingers enlarge in drumstick shape.
9. Onychoschisis

Fine, scaly, lamellar separation occurs at the tip of the nail, causing fragility. It is most frequently caused by nail polish application; however, it may be induced by systemic diseases such as SLE.

10. Ingrown nail

The sides of the nail grow into the nail fold, leading to swelling, reddening and inflammation with a granuloma-like appearance. The condition is accompanied by tenderness (Fig. 19.20a). In severe cases, a secondary infection such as paronychia occurs, causing formation of reactive granuloma (Fig. 19.20b). It is commonly caused in the great toes by pressure from wearing shoes or by clipping the toenail too short. When it occurs secondarily after nail deformity caused by fungi of the genus *Trichophyton*, the primary disease is treated. Avoidance of extrinsic pressure and maintenance of cleanliness are the first-line treatments; however, surgery may be necessary for intractable cases (Fig. 19.20c).

Fig. 19.20 Ingrown nail.

a: On the great toe. The sides of the nail grow into the nail fold, causing sharp pain. b: Reactive formation of granulation. c: Part of the nail, including the nail matrix, was removed.