Dupuytren's classification into *six* varieties is that most generally recognized by all modern surgeons:—(1st) erythema, or superficial phlogosis of the skin, without vesicles; (2nd) inflammation of the skin, with detachment of the cuticle, and formation of vesicles filled with serum; (3rd) destruction of a part of the corpus papillare and rete mucosum; (4th) disorganization of the cutis completely down to the subcutaneous cellular tissue; (5th) when, in addition to the cellular tissue, the deep structures (muscles, fasciæ, vessels, &c.) are destroyed and reduced to a black charred mass; (6th) when the whole thickness of a limb, including the bone, is implicated.

General Pathology.

In all burns there must be pains, more or less severe, according to the degree of injury; for though acute in all such injuries, it is more intense when the *surface only* of the skin is implicated than when its texture is deeply destroyed; while every burn varies according to its depth, its extent, the patient's constitution, &c., while its effect may be purely local, or may give rise to constitutional disturbance endangering more or less the life of the sufferer. Where a burn produces only an erythematous redness of the skin, but is of wide extent, the nervous and vascular systems become affected, and much pain is produced; but should the epidermis be removed by it, and the papillary surface beneath exposed, the pain is more severel and the effect on the nerves and vascular systems proportionately increased. Where the papillary surface itself is destroyed the pain is far greater and more prolonged than in the preceding instance. When disorganization of the whole integument has taken place, the pain continues only while the cause acts and the effect on the vascular and nervous systems is less marked; but inflammation will commence in four or five days tending to the separation of the dead parts, and the suffering then becomes intense. In proportion to the depth of tissue destroyed so is the time required for their separation, and also that required for the healing of the injured parts.

Symptoms.

The local symptoms of burns may be divided into three classes: (1st) where there simply exists inflammatory action tending to resolution; (2nd) where this action terminates in suppuration; (3rd) where there is complete destruction of the part. In the *first* class we find: sharp pain, the part of a bright red colour, somewhat resembling erysipelas in appearance, while vesicles filled with a clear transparent serum may be formed. Where the burn is slight, the pain and redness gradually disappear in a few hours perhaps, almost always in a few days, the case terminating by desquamation of the cuticle and resolution. Burns of this degree *may* prove fatal through excessive pain, especially in the case of children; and if situated in the head, inflammation may be conveyed to the brain through the medium of the vessels of the diploe, entailing convulsions, delirium, and coma, followed by death.

In the *second* class of burns, we find greater pain, with larger and more numerous vesicles, filled with a bloody serum, or a turbid milky fluid; the cuticle not unfrequently destroyed, exposing the rete mucosum and causing most severe pain; the parts swollen, bearing a more dusk-red appearance; and suppuration in such cases will generally commence on the fourth or fifth day. A new cuticle, of a bright red colour, will be subsequently formed.

Burns of the *third* class are effected by heat at a much higher temperature, or applied for a longer period than in the preceding. We have here a total disorganisation of the part, converting it into a deep yellowish or blackish dry mass, totally insensible to the touch, harder and tenser in proportion as its colour is darker; the adjoining skin is wrinkled (as if pinched up), the radiating folds around the burned part denoting the shrinking it has undergone. On the third or fourth day, an inflammatory circle forms around the slough, which is generally loosened between the fifteenth and twentieth day; the suppuration is then very copious, and granulations rise up with vigour.

The suffering produced by a burn may cause instantaneous death from shock to the nervous system; this frequently occurs where the victims are nervous females or children. Where instant death does not result, the sufferer sinks into a state of stupor and prostration, the pulse becomes small and rapid, the skin becomes cold and pallid on the uninjured parts, the respiration is slow and laborious, the limbs are motionless and abandoned to their own weight; the patient answers questions reluctantly and imperfectly, or perhaps, does not reply at all. This state of collapse may soon terminate either in death or in general re-action; in which case, these symptoms are accompanied by convulsions, spasms, and extreme restlessness.

Where the burn is superficial, and of no great extent, the formidable symptoms mentioned above do not occur, but a general re-action takes place. The pulse becomes frequent and strong, the skin hot, the tongue dry and red (denoting irritation of the digestive organs), while thirst, nausea, vomiting, constipated bowels, loss of appetite, &c., occur.

In extreme burns, remarkable difficulty of breathing and oppression of the lungs will be seen. Dupuytren attributes these symptoms in the first place to the impression made on the organs of circulation and respiration, and then to the secondary development of intense bronchitic irritation or considerable pulmonary congestion. Considering that the skin and lungs both eliminate carbonic acid from the system, may it not be assumed, in cases where a considerable portion of the skin has been destroyed, that these symptoms are due to the lungs being called upon to eliminate a larger quantity of carbon than usual, to counterbalance the diminution of this function in the injured skin?