

in the form of epistaxis, hæmoptysis, hæmatemesis, hæmaturia, and scorbutic dysentery. The urine is high coloured and small in quantity; the pulse is small and indicates a weak state of the circulation.

The mind is anxious and desponding, the intellect is clear, but towards the latter end this anxiety and despondency give way to apathy and indifference.

The breathlessness, which was remarked at the onset of the disease as a troublesome but not a continuous symptom, now increases, is frequently attended with faintings, especially on any exertion, and is sometimes accompanied with sanguineous effusion into the substance of the lung, and into the pleuræ and other cavities. Death occurs suddenly in many instances.

Pathology.—The examination which has been made of the bodies of men who have succumbed to scurvy has shown that the morbid appearances chiefly relate to the effusion into the cellular tissues of the body; these are the peculiar characteristics of scurvy. There are solid fibrinous effusions in the substance of the gums, and more especially in the intermuscular spaces, more abundant usually in the lower extremities than in the upper, there are also fibrinous effusions between the periosteum and the bone, constituting what are termed scorbutic nodes. The colouring matter of the blood, also, may ooze through the walls of the vessels without the rupture of the vessels. The viscera generally are not affected.

The blood is reduced in density, it contains a greater quantity of water and fibrine, and a smaller quantity of red corpuscles, albumen, and inorganic constituents than healthy blood, and it exhibits an abnormal tendency to coagulate. These characters cannot, however, be regarded as the essential conditions distinctive of scurvy; they represent only incompletely the deterioration of the blood that exists as a result of depraved nutrition.*

Causes.—The evidence is all but unanimous that the want of fresh vegetable food, or of some of the constituents which compose fresh vegetable, and probably also fresh animal, food is the cause of scurvy.

What Mr. Busk said with regard to the causation of the disease, seems to embrace the general spirit of the evidence. He considered scurvy to be “essentially a consequence of defective rather than of deficient nutrition a species of starvation,” due to the want of “a particular element, of the nature of which we are entirely ignorant,” but which is, “according to most authorities, afforded solely by fresh vegetable juices; whilst some are of opinion that fresh animal flesh, in the raw state more especially, and milk, are also possessed of powerful antiscorbutic properties.” (5249).

The opinions of the majority of the Medical witnesses who had observed scurvy and had made a study of it, coincided with the above, and were as follows:—

Dr. Pavy.—“Observation has shown us that scurvy depends upon the absence of “the proper quantity of succulent fresh food” (5150), “or its representative, some “kind of vegetable juice” (5152). Sir Robert Christison, quoted by Dr. Pavy in his evidence, says: “But all observers and authors of credit insist on the necessity of some “dietetic error as the cause of scurvy” (5191).

Dr. Guy.—“The absence of succulent vegetables from a dietary is the usual, if not “the invariable cause of outbreaks of scurvy” (5316).

Dr. Barnes.—“The only one constant condition is the privation of vegetable food” (7032) “Scurvy is a disease of a gradual breaking down of the nutritious qualities “of the blood, the gradual result of the deprivation of vegetable food” (7108).

* Mr. Busk, whose attention has been especially directed to the appearances which the blood of a scorbutic patient presents, says:—“From what is known of the character of the blood in scurvy, it may perhaps be surmised that the changes from the normal condition presented by it are due to its not being renewed with the “same rapidity, or to the same extent, as it is continually being renewed under most other circumstances. In “other words, there is, what may be termed, an arrest of development—an atrophy of the blood, which consequently demands a variable length of time, proportionate, one may suppose, to its greater or less richness, “if one may use such a word, or to the greater or less activity of the exhaustive agencies to which the “system is exposed, becomes at length unfit any longer to perform its normal function in the maintenance “of heat and the supply of energy and material for the different vital processes, but pre-eminently for those “of the muscular system.”

“With regard to the cause or causes by which this condition of the blood is brought about, though “the rationale of its or their action is quite unknown, there can be no doubt, as a matter of fact, that the “principal, if not the sole cause of true scurvy is the absence of fresh vegetable juices, or, as some suppose, “and as I think with sufficient reason, of fresh animal juices—meaning by ‘fresh’ the juices of uncooked “flesh. What may be the nature of the deficient element is at present altogether unknown, we can “therefore merely regard the effect produced by its absence in the light of an ultimate fact.”