

stances to the same effect," and, that these cases are of a nature similar to those narrated in this paper appears from his continuation, "they are often fatal with head symptoms—convulsions, delirium, or coma—supervening upon the jaundice." That they are not always of this grave character, however, appears from the cases quoted by Abercrombie, and especially of the medical man, who invariably became jaundiced whenever he had a case causing him much anxiety. We must, then, give up Cullen's explanation, and join those who see in such cases not only a retention, but a suppression of the biliary secretion. Darwin long ago spoke of a "paralysis" of the liver, though his cases, illustrative of it, are not at all similar to those I am now writing of. Copland notices a variety of jaundice caused by "suspension or arrest of the secretive functions," calling it pseudo-jaundice, "in which bile is not secreted, or formed from its elements in the blood, owing either to a paralysed or suspended state of the vital action of the liver, or to disorganization of it to an extent quite subversive of its functions. In either case the elements, from which the bile is formed, accumulate in the blood."

Now, assuming the correctness of this statement, we shall have such an explanation as will meet the two circumstances noted above; and we use it in concluding that the jaundice in these cases has not arisen from obstruction to the flow of bile from the liver to the duodenum, but in the partial or total failure of its secretion, and in its retention—or, at least, of its pigment—in the blood.\*

But, we inquire again, why do such cases differ in their rapid fatal terminations from ordinary cases of jaundice? Is it the retention of the bile which poisons the blood, and, as in the analogous case of uræmia, † impairs the functions of the brain? We might say so *a priori*, but there seems to be sufficient reason to regard this as insufficient and unsatisfactory.

In all cases of jaundice, a large quantity of bile must always be circulating in the blood; the secretions, even the humours of the eye, being

\*I am aware that this reasoning is not in accordance with the conclusion of the most recent chemico-physiologist [Lehmann] that the bile is not formed in the blood. His words are, "It may be regarded as an established fact, that the essential constituents of the bile are primarily formed in the liver.—Am. Ed., p. 476." Notwithstanding, bile-pigment and the biliary acids are found in morbid blood.

†Here again Lehmann is at variance with most authorities, who assert that urea retained in the blood causes the head-symptoms following suppression of the secretion of the kidneys. He refers these to the ammonia arising from the decomposition of urea, and referring to the experiments of Stannius, says that he "has adduced the most certain proof that, at all events, the phenomena of uræmia cannot be dependent on the mere retention of urea."—p. 625.