

quiry, there existed no pulmonary disease previous to the occurrence of the hæmoptysis; but in all the three cases the pulmonary hæmorrhage was followed by signs of consolidation and subsequently of softening of the lungs, and all three terminated fatally within six months from the time of the first bleeding.

The first case was that of a young lady, aged eighteen, who was very tall for her age, and of a consumptive family. She had three attacks of hæmoptysis—the first in July 9, 1869, the second on July 11, and the third on July 12—which were followed by quick pulse and high temperature. Nine days after the first hæmorrhage there were well-marked signs of lobular pneumonia, dullness on percussion, tubular breathing, bronchophony, and moist râles. Subsequently the temperature reached 103° F., and the sputum was characteristic of pneumonia. On the 22nd the lung was evidently softening, and the patient died on Sept. 4, fifty-seven days after the first attack of hæmoptysis.

The second case was that of a young lady, aged twenty-two, in whose family there was no phthisical history. She had two attacks of hæmoptysis, the first on Jan. 27, and the second nine days later. The bleeding was only moderate. The first hæmorrhage was followed by quick pulse and frequent respiration (40 per minute). The temperature was 99° F. There ensued dulness under the left clavicle, absence of vesicular breathing, and slight tubular breathing. Distinct symptoms of pneumonia followed, even herpes on the lip. Softening set in, and she died on March 13, forty-four days after the first attack of blood-spitting.

The third case was that of a medical student, aged twenty-one, of a healthy family, who was attacked with hæmoptysis, after clearing a large fence, when grouse-shooting in August, 1867. This was followed by pneumonic consolidation, which persisted. On January 8, softening was going on, and he died at the beginning of February, five months from the occurrence of the hæmoptysis. Dr. Finny remarks that it was not till some days after the first hæmorrhage that the symptoms and signs of inflammatory changes in the lungs gradually developed in these cases. All the patients were young, and, speaking generally, in good health.

With respect to the probable cause of the bleeding, Dr. Finny does not regard with much favour the hypothesis of a previous diseased state (fatty degeneration) of the arteries of the lungs, as there have been few opportunities of examining these organs microscopically at the very outset of consumption. He also does not view with approval Laennec's theory of the hæmoptysis being due to tubercles deposited in the lungs and lying latent there till such time as some sufficient exciting cause shall call them into activity. The theory which commends itself most to this physician is the accidental rupture of some blood-vessel; in consequence of some undue exertion on the part of the patient. This theory of accidental bleeding is borne out by the history of the cases narrated by Dr. Finny.

Dr. Finny considers that the death of his three

patients was the direct consequence of the pulmonary hæmorrhage; and 'that the hæmorrhage and the inflammatory action in the lungs bore to each other the relation of cause and effect.' With regard to the steps of the morbid process, Dr. Finny's views are in general accordance with those of Niemeyer in his lectures on phthisis. Dr. Finny answers the objection that blood does not and cannot produce inflammatory action in the lungs, by adducing instances in which blood is acknowledged by competent authorities to set up inflammation in other mucous membranes, as, e.g., in the nares and vagina, when a plug soaked in blood is allowed to remain too long in contact with the mucous membrane. He does not agree with Niemeyer that hæmoptysis is a frequent cause of phthisis; and he is of opinion that hæmorrhage may occur without any resulting inflammatory action; and even when inflammation does follow an attack of bleeding, he thinks the pneumonic products are in some cases sooner or later absorbed.

Whether rapid consumption will follow an attack of hæmoptysis or not depends, according to Dr. Finny (and upon this point he would lay considerable stress), on the presence or absence of the strumous or scrofulous diathesis in the person attacked. He believes this factor to have been present in the three cases he has recorded. Dr. Finny then goes on to explain what he means by the scrofulous diathesis, and concludes a very able paper by stating his belief that in his cases the phthisis was partly due to tubercles developed in the lungs in consequence of the system being infected, owing to the retrograde metamorphosis of the products of the catarrhal pneumonia, and by the blood effused into the air-vesicles. There were, however, no post mortem examinations allowed in the cases brought forward.

SHORT NOTES.

TEST FOR PEPSIN.

Prof. Tuson proceeds as follows in order to judge whether a given sample of pepsin is up to the standard of quality. Boil an egg for an hour, and cut a portion of the white into the thinnest possible slices. Take a two-ounce wide-mouthed bottle and introduce into it 77 grains of the sliced white of egg, 1½ grains of pepsin, 4 minims of strong hydrochloric acid, and 420 minims of distilled water. Place the bottle in a water bath and keep it for four hours at a temperature of 100° F. At the end of the experiment all the albumen should have been dissolved, nothing remaining but minute quantities of fibrous or membranous matters.

PHYSIOLOGICAL ACTION OF LIGHT.

The latest researches on the physiological action of light are by Dr. McKendrick and Mr. James Dewar, of Edinburgh. They have recently obtained a change in the electro-motive force of the retina, even by feeble moonlight, and have established the fact that the specific action of light on the retina is a change in the electro-motive force of the optic nerve. The retina becoming fatigued

under the action of light, the eye is more sensitive to variations in light of low intensity than to variations in light of high intensity.

BROMIDE OF POTASSIUM IN ANGINA PECTORIS.

In a paper lately presented to the Society of Medicine of Antwerp, Dr. Pappilaud related various cases of *angina pectoris* in which the use of bromide of potassium afforded the best results. He begins with half a drachm of the salt daily, and increases the dose by half a drachm weekly until he reaches the dose of two drachms. Generally the intensity of the fits rapidly abates, and recovery takes place after two or three months.

PHOSPHORUS PROMOTING THE GROWTH OF THE HAIR.

A correspondent of the *Lancet* mentions that doses of phosphorized oil in cod-liver oil restored the growth of his hair, and improved its quality and colour. The same effect was observed in a friend to whom the prescription was given.

THE ASSIMILATION OF FAT.

Hofmann (*Zeitsch. f. Biologie*) has made numerous experiments with a view to determine whether fat is deposited in the tissues from the food or not, or whether it first undergoes conversion. He starved animals till all the fat of the body was supposed to be absorbed, and then fed them on nearly pure fat. Analysis proved that a considerable quantity had been assimilated and deposited in the tissues. The deposit takes place chiefly in the liver and mesentery. That fats are not all burnt off is also shown by the experiments of Pettenkofer and Voit, who have found less carbon extracted than would be the case if all the fat animals receive in their food were burnt off.

COLOURLESS BILE.

Ritter (*Comptes Rendus*, vol. LXXIV.) has examined the colourless fluid which is sometimes found in the human gall-bladder, and is usually regarded as mucus. He finds that it contains salts of the bile-acids, mineral salts, fat, cholesterol, and traces of other organic matters, but no pigment. In several cases, especially in those occurring in animals, the colourless bile was associated with jaundice, and in all cases the liver had undergone more or less fatty degeneration.

ATROPIZED CASTOR OIL.

Mr. D. L. Owen, Surgeon to the Eye Hospital, Birmingham, states (*Brit. Med. Journ.*) that in the treatment of irritable ulcer of the cornea, and of abrasions of the epithelium, it is generally desirable to use some application of a viscid nature, which may fill up the inequality of surface and reduce the irritation caused by the movements of the eyelid to a minimum. For this purpose no remedy is so fit as castor oil; and if to the oil be added the sulphate of atropia in the proportion of from one to four grains to the ounce (to which extent at least it is soluble), a convenient agent is obtained, which combines the beneficial effect of atropia with the mechanical advantages of oil. In these special instances, castor oil is to be preferred as a vehicle before either gelatine or glycerine, since it is not, like glycerine, painful when applied to the surface of the eye, nor, like both, readily washed away by the tears.