

the frailty of our nature, bad examples are much more contagious than good ones, the physicians set up a number of dispensaries in opposition to the apothecaries. These dispensaries enjoyed a large share of public patronage; and the assistants who were employed at them, under the instruction of the physicians, afterwards became dispensing chemists on their own account. From this source Mr. Bell dates the origin of the chemists and druggists.

From this period down to the year 1815 we find nothing but a series of unseemly quarrels, on the score of privileges between the apothecaries and the druggists. Mr. Bell gives a concise history of the various phases of this intestine war, and we must say, with little leaning to his own craft. The apothecaries were upheld by law, the chemists supported by public opinion; and after a contest, which continued for more than a century, the affair terminated in the admission of the "chemists' clause" into the act of 1815.

From this date the only point of contention between chemists and the profession was the right of practising medicine, asserted by some and acted upon by many of that body. Upon this point we shall not at present make any remarks. But a more important one for the well-being and respectability of the whole body of chemists and druggists was the expediency of obtaining for them a political existence, and uniting them into one society under the countenance and with the sanction of the law. This desirable end was attained by the formation of the Pharmaceutical Society and the subsequent granting of a royal charter. These events must exercise a highly beneficial influence on the progress of scientific pharmacy in the United Kingdom, and we cannot close these few observations without expressing our sense of the zeal and talent which Mr. Bell has shown in conducting a difficult enterprise to so successful an issue.

ACADEMY OF MEDICINE, PARIS.

April 4, 1843.

MENINGEAL APOPLEXY.

M. Prus read a memoir on this subject, of which the following is the substance:—The author distinguishes this form of apoplexy into two species—viz., sub-arachnoid and intra-arachnoid, and points out the differences between them.

In sub-arachnoid hæmorrhage the blood is frequently derived from a ruptured artery or vein; in twenty-four cases related by the author, this occurred fifteen times, and the rupture of the vessel may have existed in the remaining nine cases. In intra-arachnoid hæmorrhage the effusion of blood always arises from exhalation of that fluid. In the former species the blood is mixed with the cerebro-spinal fluid, and has a constant tendency to pass into the ventricles and vertebral canal; in the latter species the effused blood is generally limited. In sub-arachnoid apoplexy

we never find any trace of false membranes; but in intra-arachnoid we always have a false membrane enveloping the clot about the fourth or fifth day.

Symptoms.—Muscular paralysis rarely accompanies sub-arachnoid hæmorrhage; it was met with only thrice in twenty-four cases. On the other hand, in eight cases of intra-arachnoid apoplexy, muscular paralysis occurred six times. Loss of sensation, when it does exist, which is very rare, is but slight in both species.

Deviation of the mouth is peculiar to meningeal hæmorrhage. Somnolence and coma almost constantly exist in both. In sub-arachnoid hæmorrhage we have no delirium, fever, or peculiar dryness of the tongue, which belong to the arachnitis which comes on, about the fourth or fifth day, in cases of intra-arachnoid hæmorrhage.

Termination.—Sub-arachnoid hæmorrhage was constantly fatal within eight days. In cases of intra-arachnoid apoplexy the patients sometimes lived for thirty days or more; and in some cases a cure is obtained, the blood being absorbed by the enveloping cyst. M. Prus cites an example of this mode of recovery.

Treatment.—In sub-arachnoid hæmorrhage the treatment should be directed towards moderating or arresting the effusion of blood, and palliating the effects of pressure. In intra-arachnoid hæmorrhage there are other and important indications to be fulfilled. The formation of the false membrane, which envelops and may absorb the clot, is not to be interfered with too far, while the effects of arachnitis must be checked.

INFLUENCE OF CLIMATE ON PULMONARY CONSUMPTION.

M. Casimir Broussais read a short paper on this interesting subject. The author's conclusions are founded on the sanitary reports addressed by the surgeons attached to the forces in all parts of France and Africa to the military board of health. From the African reports it would appear, that of 40,341 patients who were carefully examined, only 62 labored under phthisis, giving a ratio of 1 to 650; and only 1 death from phthisis to 102 from all other diseases. Now, the ordinary mortality of the French army from phthisis is 1 to every 5 deaths from other diseases, as has been shown by the researches of M. Bensiston de Châteauneuf.

This difference is so great, and has been deduced from so large a number of cases, that if it should be shown to be constant, the beneficial effects of the African climate in cases of phthisis may be considered as proven. M. Broussais does not conceal the objections which may be offered to any conclusions drawn from his facts. The principal are contained in the following questions:—Are the African troops, which furnish a mortality from phthisis of 1 in 102, of the same class as those which in France give a mortality of 1 in 5? Are they not selected troops, stronger, &c.? Finally, is not the mortality from phthisis replaced by some other which cuts off those whom phthisis would have attacked at a subsequent period, had they survived.

M. Broussais examines and discusses these objections in succession, and concludes,—

1. That no statistical documents prove the frequency of phthisis in India.

2. That the mortality from phthisis amongst the English soldiers in the West Indies is small, and one-fourth less amongst Europeans than black or colored people.

3. It has not been proved that pulmonary consumption is frequent in Martinique, Senegal, Cayenne, or Italy; on the contrary, the imperfect statistics which we possess seem to show the contrary.

ROYAL SOCIETY.

March 2, 1843.

On the Special Function of the Skin. By ROBERT WILLIS, M.D.

The purpose which is answered in the animal economy by the cutaneous exhalation has not, hitherto, been correctly assigned by physiologists. The author believes the essence of the function to be the elimination from the system of a certain quantity of water, and considers the saline and other ingredients which pass off by the skin to be too inconsiderable in quantity to deserve being taken into account. He combats the prevailing opinion, that this function is specially designed to reduce or to regulate the animal temperature. It has been clearly shown by the experiments of Delaroché and Berger that the power which animals may possess of resisting the effects of a surrounding medium of high temperature is far inferior to that which has been commonly ascribed to them; for in chambers heated to 120° or 130° Fah., the temperature of animals is soon raised 11° and even 16° Fah. above what it had been previously, and death speedily ensues. The diminution or even total suppression of the cutaneous exhalation, on the other hand, is by no means necessarily followed by a rise in the temperature of the body. In general dropsies, which are attended with a remarkable diminution of this secretion, an icy coldness usually pervades both the body and the limbs. A great fall in the animal temperature was likewise found by Fourcault, Becquerel, and Breschet to be the effect of covering the body with a varnish impervious to perspiration; and so serious was the general disturbance of the functions in these circumstances that death usually ensued in the course of three or four hours.

The question will next arise, how does it happen that health, and even life, can be so immediately dependent as we find them to be on the elimination of a quantity of water to the extent of about thirty-three ounces from the general surface of the body in the course of the twenty-four hours? To this the author answers, that such elimination is important as securing the conditions which are necessary for the endosmotic transference between arteries and veins of the fluids that minister to nutrition and vital endowment. It is admitted by physiologists that the blood, while still contained within its conducting channels, is inert with reference to the body, no particle of which it can either nourish or vivify until that portion of it which has been denominated the *plasma* has transuded from the vessels and arrived in immediate contact with the particle that is to be nourished and vivified; but no physiologist has yet pointed out the efficient cause of the tendencies of the plasma—first, to transude through the walls of its efferent vessels; and secondly, to find its way back again into the afferent conduits. The explanation

given by the author is, that in consequence of the out-going current of blood which circulates over the entire superficies of the body perpetually losing a quantity of water by the action of the sudoriparous glands, the blood in the returning channels has thereby become more dense or inspissated, and is brought into the condition requisite for absorbing, by endosmosis, the fluid that is perpetually exuding from the arteries kept constantly on the stretch by the injecting force of the heart. Venous blood has, in fact, by repeated experiment, been found to be somewhat more dense than arterial blood, which being assumed to have a mean density of 1,050, venous blood may be taken as possessing a mean density of 1,053.

In an appendix to the paper, the author points out a few of the practical applications of which the above-mentioned theory is susceptible. Interference with the function of the skin, and principally through the agency of cold, he observes, is the admitted cause of the greater number of acute diseases to which mankind, in the temperate regions of the globe, are subject. He who is said to have suffered a chill has, in fact, suffered a derangement or suppression of the secreting action of his skin; a process altogether indispensable to the continuance of life has been implicated, and disturbance of the general health follows as a necessary consequence. Animals exposed to the continued action of a hot dry atmosphere die from exhaustion; but when subjected to the effects of a moist atmosphere of a temperature not higher than their own, they perish by the same cause, and that very speedily, as those which have had their body covered with an impervious glaze; in both cases, the conditions required for the access of oxidised and the removal of deoxidised plasma are wanting, and life necessarily ceases. The atmosphere of unhealthy tropical climates differs but little from a vapor-bath at a temperature of between 80° and 90° Fah.; and the dew point in those countries, the western coast of Africa for example, never ranges lower than three or four degrees; nay, is sometimes only a single degree below the temperature of the air. Placed in an atmosphere so nearly saturated with water, and of such a temperature, man is on the verge of conditions that are even incompatible with his existence; exposure to fatigue or to the burning sun, by which the activity of the skin is excited whilst the product of its action cannot be taken up by the air, is then necessarily followed by disease, which experience has shown to be of the most formidable nature. The terms *miasma* and *malaria* may, according to the author, be regarded as synonymous with air at the temperature of from 75° to 85° Fah., and nearly saturated with moisture.

What is the cause of the rapidly fatal event in the most acute forms of scarlatina? The dead body of the victim of this disease gives us no information. The patient has undoubtedly been placed by the nature of his disease in precisely the same circumstances as he would have been had his body been completely covered by an impervious glaze; the function of his skin is abolished, and unless this be speedily restored he will be lost. The remedy then is not to be sought in wine and brandy, but in tartar emetic.—*From Proceedings of the Royal Society, March 2nd and 9th.*