loupe reported the case of an old, dissipated man, whose ankle was run over by the cars. Amputated a little below the knee. He did well for three days; on the fourth, mortification began at the hip and extended upward and downward, proving fatal in twenty-four hours. There had been no injury to the hip.

Tedious Labor.—Dr. Galloupe reported a case of labor in which, when it had lasted seventy-two hours, the os was only dilated enough to admit the finger, and there seemed to be no pressure from above, although the pains were strong all that time. He finally ruptured the membranes, when the head immediately descended and the labor went on rapidly, but the pains afterwards died away and it had to be completed with the forceps.

Malformation.—The child, in the above case, was healthy, but curiously malformed, having a large scrotum with a small hole in the middle of the front; there was no penis in sight, and the child urinated through the hole. The scrotum contained testes and penis, the urethral orifice of the latter being evidently attached to the hole in the scrotum.

Hour-glass Contraction.—Dr. Perley reported the case. After delivery, he waited some time for the delivery of the placenta, which he could not reach with the finger. Much flowing occurred. He finally introduced his hand, and had to force it through a stricture in the middle of the womb to find the placenta, which was imprisoned in an upper chamber, and adherent. The cord was very short and twisted around the child's leg. The contraction was perhaps produced by the cord being dragged upon during labor.

In answer to a question, Dr. P. said that ergot was administered after the child was born, while waiting for the placenta.

Selected Papers.

SEA-SICKNESS, AND SOME OF THE MEANS OF RELIEVING IT.

By Sir JAMES ALDERSON, M.D., D.C.L., F.R.S., &c.

THE cause of sea-sickness and its possible amelioration is a subject particularly appropriate at the present time. It is more agreeable to offer suggestions for relief than to comment on the sybaritic weakness which is generally displayed in impatience

of the evils usually to be encountered in a passage across the Channel. When we remember that not half a century ago, people, after waiting days or perhaps weeks for fair wind and weather, were glad to consider a voyage of six hours of tossing and sickness as a very favorable one, one can hardly understand how the present generation feel it unendurable to submit to a single hour and a half after having started at a given time. Though, however, we must admit the fact that we are less brave in meeting discomforts than our predecessors, there is still satisfaction in diminishing those discomforts to the utmost in our power.

We have seen the futility of various childish devices, such as stimulants, globules, ice-bags, &c., all of which, not being based on any true knowledge of the evils to be met, are merely empirical. Rejecting all of these, therefore, it will be well to invite attention to a scientific explanation of the cause of sea-sickness, and to base on that explanation a proposal for a remedy.

A suggestion was made sixty years ago, by Dr. Wollaston, that sea-sickness proceeds from pressure of blood upon the brain; and this view is supported by pathological observations, since injury or pressure on the brain is almost invariably attended by vomiting, which is its earliest symptom. Dr. Wollaston explains the way in which pressure is induced upon the brain during the motion of a ship at sea, by reference to the action of mercury in the tube of a barometer. He says "that if a barometer be carried out to sea in a calm, the mercury will rest at the same height as when on shore; but when the ship falls by the subsidence of the waves, the mercury is seen apparently to rise in the tube which contains it." I may add to this, that anyone who has carried a mountain barometer, and has happened to let it descend suddenly, must have been sensible of a concussion of the mercury against the top of the tube, and must have felt and heard the blow. In fact, the mere action of walking is sufficient, by the alternate rise and fall of the hand to produce this effect. Dr. Wollaston considers that the action of the blood on the brain, at the moment of the descent of the ship, is identical with that of the mercury on the top of the barometer, and that there is an actual pressure, and even a blow, which, by frequent repetition, produces nausea and vomiting. Now it is to be regretted that Dr. Wollaston does not state the true scientific explanation of the apparent rise of the mercury in the barometri-

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cal tube, to which inaccuracy may possibly be referred the reason why so little notice has been taken of this valuable suggestion. It is not necessary here to analyze his statement with a view to refute it. The fact is undeniable, that contact does take place between the mercury and the upper part of the tube with more or less violence, and the proper explanation of the apparent rise of the mercury when the tube descends is this: that when the rigid tube falls, the mercury, having its own inertia, and not being attached to, or a part of, the tube, remains stationary—at least for a time; thus the tube is pushed down upon or over the mercury, and the concussion takes place. Exactly the same occurs between the brain and vessels on the one part and the blood on the other. The approximately rigid brain and vessels are carried downwards, the blood remains by its own inertia, and the consequence is to crowd blood into the vessels of the brain, and so press with increased force, producing a certain shock; this shock and the attendant pressure produce sickness and vomiting. The vomiting thus induced is of a peculiar character—very different from that proceeding from a common disordered stomach; it occurs in a spasmodic manner, and violent retching remains after the contents of the stomach have been ejected. This continuous retching seems to indicate the repeated action of the increased pressure.

Referring to the experience of sufferers from sea-sickness, it is admitted by all that they are most sensible of the miserable feeling at the moment of the descent of the ship. They are also conscious at that particular time of an instinctive effort to sigh or take a deep inspiration, the meaning of which is manifest. During deep inspiration the chest is dilated for the reception of air, and its vessels become more open to admit blood, so that a return of blood from the head is then more free than at any other period of complete respiration; whilst, on the contrary, by the act of expelling air from the lungs, the ingress of blood is obstructed. This obstruction is proved by observation when the surface of the brain is exposed by the operation of trephining; a successive turgescence and subsidence of the brain is then seen in alternate motion with different states of the chest. A deep inspiration, therefore, at the time of the descent of the ship tends to counteract the turgescence of the brain.

Sickness is sometimes produced by waltzing. In this case the same theory of pressure on the brain holds good; but during

rapid gyration in waltzing the blood is acted on differently: it is centrifugal force which causes the blood to rise in the vessels supplied to the brain. There is an additional cause of cerebral disturbance from the confusion of objects rapidly presented to the eye; from this comes giddiness.

In reference to sickness brought on by swinging, I cannot do better than quote Dr. Wollaston: "Sickness by swinging is evidently from the same cause as sea-sickness, and that direction of the motion which occasions the most piercing sensations of uneasiness, is conformable to the same explanation already given. It is in descending forwards that this sensation is perceived, for then the blood has the greatest tendency to move from the feet towards the head, since the line joining them is in the direction of the motion; but when, in the descent backwards, the motion is transverse to the line of the body, it occasions but little inconvenience, because the tendency to propel the blood towards the head is then inconsiderable."

This last observation of Dr. Wollaston, quite accurate as to the result, plainly suggests the practical bearing of the subject. Knowing the mode in which the ship's movement acts on the brain, we are at once furnished with the only rational way of averting sea-sickness.

The first point is wholly to avoid the upright posture. Every one knows that it is a common practice to lie down, and this is done almost instinctively, but it is also known that to do so, though frequently successful, is not invariably so. The way in which the motion in a swing affects the brain affords the proper explanation why lying down is not invariably successful; and shows that it is necessary, not only to take a recumbent position, but to lie in the right direction. A person lying down with the feet towards the bows of a ship is, whilst it descends in pitching, in the same position as a person in a swing descending forwards, in which case we have seen that sickness is produced by blood being forced upon the brain. On the contrary, a person lying down with his head towards the bows is, during the descent of the ship, in the position of one descending backwards in a swing, in which case the pressure by the blood will be towards the feet, and, therefore, relief rather than an inconvenience will be experienced, the tendency being to reduce the natural supply of blood to the brain. It is necessary, not only to lie down, but to do so with the head to the bows; and it is highly desirable that this position

should be assumed before the ship begins to move. There is a secondary advantage to be gained by closing the eyes, and so shutting out the confusion arising from the movement of surrounding objects.—*Brit. Medical Journal*.

Medical and Surgical Journal.

BOSTON: THURSDAY, APRIL 25, 1872.

THE USE OF TEPID BATHS IN THE TREATMENT OF FEBRILE DISEASES.

IN the *Annales et Bulletin de la Soc. de Med. de Gand* are given, at some length, the results of a series of experiments by M. Schützenberger on the temperature which may advantageously be adopted in the use of baths in febrile affections. We give an abstract of the article.

For more than a year, M. Schützenberger has conducted his investigations. So long as the heat, one of the symptoms of fever, remains below 39°05 cent. (103° Fahr.), even when the pulse is high, no serious danger may be looked for to the economy. But when the temperature rises to 104° and beyond, it becomes in itself dangerous to the organism; it shows that an active combustion is going on among the tissues, which causes their rapid destruction, so long as the fever continues. In order to diminish the heart's action and to lower the temperature, recourse has been had to digitalis and to methods of external refrigeration, applied in different ways. It has been noticed that, if the baths at 15° to 20° (59° to 68° Fahr.) produce a marked depression of the heat, this advantage is counterbalanced by serious inconveniences. Many of the sick are seized, immediately after their introduction to the cold water, by a chill; the use of the bath becomes disagreeable to them and they refuse it altogether. In addition, serious attacks of pneumonia, with the occurrence of plastic exudation, often supervene on the use of the cold bath.

To avoid these dangers, M. Schützenberger advised the use of tepid baths, of which the temperature varies from 22° to 27° (71°

to 80° Fahr.). During the years 1870–71, these baths have constituted the principal treatment of those under his care suffering from typhoid fever; of those, at least, whose temperature, rising above 39.5° (103° Fahr.), demanded active treatment. The simple and mild cases, in which the temperature did not exceed this point, were left to themselves. The baths were continued for fifteen or twenty minutes, until the supervention of the, so-called, goose-flesh, or a chill. A lowering of the temperature, varying from .5° to 1°, was always noticed within half an hour from the bath; in some cases this lowering of the temperature even reached 1° or 2°; and, in a few cases, it was not materially changed. In one case, which had been more carefully watched on account of the unusual symptoms developed, the bath caused an increase of the temperature.

The lowering of the temperature observed after the bath, continued in the majority of cases, during the remainder of the day; but, on the next day, a fresh elevation of temperature obliged a return to the bath. After a certain number of baths, the thermometer showed that the temperature did not return to the point reached before the use of the bath. By continuing the bath thus methodically, M. Schützenberger has been able to keep the fever within normal limits, that is below a temperature of 39° (102° Fahr.).

The favorable influence of the baths has been noticed in other symptoms than the heat alone. The nervous phenomena—delirium, insomnia and the like—have diminished in their intensity, the tongue has become clean, the abdominal disturbances have been decreased, meteorism has not supervened, and, when it has already been present, it has yielded quickly to cold compresses. As an addition to the treatment, cold was applied to the head, cold drinks were used, and quinine prescribed to the extent of 20 to 30 centigrammes daily. The diet consisted of milk and broth, when the condition of the tongue allowed.

By this method of treatment, the statistical results obtained in the cases of typhoid fever during the year 1870 were re-