

most respectable Jack of all trades and master of none. Is not the remedy for all this mischief and confusion obvious? Let institutions for educating general practitioners in all departments be established, or existing ones encouraged. It is true that few of the present medical corporations can educate or licence the general practitioner, neither do they wish to do so. The Universities would not descend from their high places; and if they would they could not, reverencing as they do the injunctions of Henry, Elizabeth, James, and Charles. The colleges of pure surgery are equally disabled. The impudent pretensions of the retail druggists or apothecaries to meddle in any way with medical education, is, of course, only to be treated with contempt and derision.

The licentiates of the College of Physicians, a body unauthorised to grant what are called medical degrees, assume the title of doctors. Every man who gives physic is to the public a doctor. But is not the magic of the title gone for ever? Who would call himself doctor for distinction sake, or to establish his professional superiority? Should not a man at present pause before he fixes indelibly a title on himself which he must enjoy in common with the very lowest grade of pretenders to the healing art? Where is the honour in the title which an apothecary can obtain by stepping from behind his counter into a Scotch steam-packet in November, and returning next day by the same conveyance, and repeating the same migration in the following May? No, that delusion has passed: the public must have some better proof of your capacity than that "leather or prunello."

[The remaining portions of the lecture related exclusively to arrangements and misarrangements in the Irish medical corporations and schools, and being of less general interest to the profession, we abstain from its republication.]

#### ON THE IMMEDIATE CAUSE OF DEATH FROM DROWNING,

AND THE  
TREATMENT OF SUSPENDED ANIMATION.

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THE immediate cause of death from drowning, or immersion under water, is not generally known, and is, therefore, frequently misunderstood; the treatment, too, I am sorry to say, adopted generally in such cases, is quite inapplicable.

Many suppose that death is produced by the water entering into the trachea, which thus filling the air-cells of the lungs, produces suffocation, from the exclusion of the atmospheric air. So far from this being the case, it is found, on making a post-mortem

examination, that not even a drop of water has entered the trachea. How, then, is suffocation induced? Simply as follows:—As soon as the individual becomes immersed beneath the surface of the water, an attempt (frequently an involuntary one) is made to inspire; the water, by this means, is drawn into the larynx, but the first drop which touches the chordæ vocales, throws the constrictor muscles of the larynx into spasmodic contraction; the rima glottidis is immediately closed, and is retained so until all attempts at respiration cease, and even for some hours after. This, then, is the first function suspended, but circulation also soon ceases, and death results.

That such is the state of parts I had an opportunity of verifying in a subject brought into the Westminster Hospital School, a few weeks since, and which had been taken out of one of the canals in the neighbourhood of London. In this instance the lungs did not contain any water; they were, however, gorged with blood, particularly towards their posterior surface (caused, no doubt, by the gravitation of the fluid to this part, from the position of the subject), and a quantity of frothy mucus was contained in the interior of the trachea. On opening the heart its cavities were completely emptied of blood, with the exception of a small quantity, which was still fluid, in the right auricle and ventricle.

A cessation of respiration, caused by the spasmodic closing of the rima glottidis, being, then, the cause of death, the most judicious plan of treatment is evidently to restore this function as soon as possible. This cannot be effected so long as the spasmodic action of the muscles continues; we should, therefore, at once proceed to the introduction of air by mechanical means.

Two plans have been recommended for this purpose; one, the passing of a catheter through the nares into the larynx, by means of which, and a complicated bellows attached to its free extremity, the air may be injected into the lungs, and again removed; the other, the performance of the operation of laryngotomy. The first of these plans is highly objectionable, as few are provided with the instruments at hand, and they, even if convenient, are so difficult of application, that much time must necessarily be sacrificed before the surgeon can assure himself that he has passed the tube into the trachea, and not into the œsophagus. This he can only ascertain by introducing his fingers into his patient's mouth; but how much valuable time is lost in doing this? A minute; nay, a few seconds, may decide the life of the patient, and the surgeon sacrifices many, in groping for the extremity of the catheter in the fauces of his victim! But at length all is set to rights; the operator commences the process of inflation; the air-cells are forcibly distended with air;

they give way, and an emphysematous lung soon disposes of the small chance that had previously existed of the patient's recovery.

The operation of laryngotomy is liable to none of these objections; it is performed in half a minute, or less, by passing a trocar and canula into the larynx, through the crico-thyroid ligament, or, when these can not be procured, with a common lancet, or even a penknife, a quill or strong straw being made to answer the purpose of a canula; the air being caused to enter and escape from the lungs, by alternately compressing the lower part of the thorax, and then removing the pressure, thus simulating, as far as is possible, the natural act of respiration. Some, perhaps, may object to the operation on account of the difficulty of its performance, and the wound which is made into the larynx; but both these objections are futile, and can never be entertained for a moment by any person at all acquainted with the subject. The operation is more simple than that of bleeding, and the wound, if closed with adhesive plaster, will heal without any bad consequences.

While the surgeon is engaged in performing the operation, the application of heat to the surface of the body, and stimulant applications to the integuments of the chest, and to the mucous membrane of the nose, should be resorted to. Of these the liquor ammoniæ is the best, as most rapid in its action, care being taken to prevent its escape by evaporation, when applied to the integuments of the chest. I see no objection to the spirits of wine being applied over the thorax, and then set on fire; we may, by so doing, rouse the action of the heart and muscles of respiration, which, if once procured, success is almost certain.

If we contrast the phenomena just mentioned, which occur during drowning, with those that present themselves in the production of asphyxia from other causes, such as the inhalation of carbonic or other gases destructive to life, we shall have much reason to *expect* a more favourable result to our efforts in the former than in the latter cases. In the one, a destructive gas has been slowly taken into the system, venous or imperfectly oxygenated blood has circulated in the brain, heart, and arteries; the nervous system has been slowly paralysed, and its energy destroyed, by the direct contact of a noxious agent; in addition, the muscular fibres of the heart, vessels, and muscles of respiration, have been deprived of contractility by the same means, either directly by the action of the gas on the muscular fibre, or indirectly through the nerves distributed to these parts. All these effects must be superseded before we can indulge in the hope of our patient's recovery; but not so in asphyxia from drowning; here, there is no destructive agent to contend against, no

deleterious principle to be removed, no noxious vapour to be neutralised; suspended animation has been caused by the *want* of the proper stimulus, namely, the atmospheric air, not by the *presence* of any ingredient injurious to life; nor have we, here, the circulation of the venous blood in the arteries of the brain, as the action of the heart ceases too rapidly for this to take place.

But how different *has been* the result! How often have individuals been recovered from a state of suspended animation, caused by their immersion for many minutes in a deleterious gas; how seldom after drowning?

It is true that in drowning the immersion of the body in the water, particularly in cold weather, lessens our chances of success, the animal heat being so much more rapidly carried off or absorbed by this fluid, than by any of the gases I have mentioned; this, however, can only have such influence during the winter months.

I cannot too highly deprecate the practice of a number of persons crowding into the room, when the efforts are being made to restore suspended animation; indeed, such is the state of the air frequently in those apartments, that it is better suited to the suffocation of the living than to the kindling of the feeble spark that may still animate the prostrate figure before us.

The operation of laryngotomy should also be performed in all those cases of sudden death which occur during meals, if we have reason to suspect that a morsel of food has become impeded either in the pharynx or larynx. In the former case the judicious surgeon will first attempt the removal of the foreign body with his fingers or the probang.

If a body have remained for twelve or twenty-four hours in the water, we may expect to find some of the fluid in the lungs, as by this time the contraction of the muscles of the larynx will have ceased.

7, Duke-street, Westminster,  
Nov. 19, 1838.

ON THE  
CAUSES, NATURE, AND PREVENTION  
OF  
ICTERIC OR YELLOW FEVER.

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YELLOW fever is an effect almost peculiar to the tropical zones (*Blane*); it is not entirely so, for it is not uncommon in the southern part of North America, and has been even seen rarely in France and Spain, but constantly preceded in these latter countries by unusually hot weather. Now, if there be a peculiar effect, there must also be a peculiar cause; and what is that peculiar cause but elevated temperature? For nei-