

a waterman standing knee-deep in the sludge off the Surrey shore attempting to lasso a floating body. It was that of an elderly man. He was lying on his back as if resting in a hammock, his knees and hips partly flexed, the head and shoulders bent slightly forward, while his arms and hands, at full extension, grasped the edges of a faded Prince Albert coat as if to draw its skirts protectively about his thighs. While the waterman secured the body a young constable signalled a police launch, which towed the remains towards Westminster Pier. Did he fall or was he pushed? This question naturally arises, for the manner of death may influence in some degree the way a body floats. Its discussion must be left to those with more knowledge of these matters than myself.—I am, etc.,

Bognor Regis.

H. D. LIVINGSTONE-SPENCE.

SIR,—I agree with Dr. Hugh Willoughby (December 2, p. 1227) that female adult corpses float face upwards and male corpses float face downwards in fresh water. I have seen them in rivers as far apart as the Yangtze (China) and the rivers and ponds of India and England. It is sometimes difficult for students and busy doctors to keep these facts in mind clearly, but it is helpful if one remembers that in death from drowning the two sexes float in a position complementary to each other.

I am sorry that I have no experience of salt water in these cases.—I am, etc.,

Appleby Magna, Staffs.

J. R. SALMOND.

### Peanut from Bronchus by Percussion

SIR,—The following case report might be of interest.

The patient, a Chinese boy aged 10 years, was admitted to the Chuanchow General Hospital, Tsinkiang, Fukien, on August 10. His mother stated that, four days before, while eating peanuts he had had an alarming paroxysm of coughing during which he became blue in the face and unable to speak. He was still reluctant to talk. Since the accident he had had some evening fever, and frequent attacks of cough during which he became breathless and cyanosed, but he had not been able to cough up anything. He was somewhat breathless between attacks. At home he had been inverted and his back beaten soundly, but without result.

The child was obviously quiet and anxious, but walked into the consulting-room himself, though he avoided any exertion or sudden movement. He was small for his age, but in good condition. On examination of his chest the right side appeared somewhat collapsed, and respiratory movements and breath sounds were reduced on this side. Temperature on admission was 100° F. (37.8° C.). No other abnormal signs were elicited. A radiograph showed that the mediastinum was shifted towards the right side, but the right lung was still well aerated. A diagnosis of a peanut partially obstructing the right main bronchus was made.

As our hospital is not provided with a bronchoscope the problem of how to remove it was a difficult one, though probably not unique. Our child's size oesophagoscope was obviously too big to pass the cords. Chevalier Jackson states that only 2% of foreign bodies are spontaneously evacuated from the bronchi, and then not usually until the patient is seriously ill.

We remembered that, in some cases of post-operative collapse of the lung, plugs of mucus can be shaken out of the bronchi by the use of postural percussion—i.e., laying the patient with the affected side uppermost, and the head low, then percussing with the closed fist over the other hand placed over the lateral aspect of the ribs. We decided to try to dislodge the peanut in this fashion.

Peanuts and other vegetable foreign bodies cause intense inflammatory reaction in the respiratory passages around the nut, holding it more firmly; also after four days there would be secondary infection increasing the inflammatory swelling. So first we gave penicillin (15,000 units three-hourly for 24 hours) and steam inhalations of tinct. benzoin. co., hoping thereby to reduce this swelling a little. At the end of this time 0.5 ml. of liq. adrenalin. was injected, to reduce the congestion and swelling of the mucosa further and relax any spasm of the bronchus. About five to ten minutes later the patient was taken by the legs and inverted to about 60°. Owing to his struggles it was necessary to have further assistance to hold his chest with the affected side uppermost. The right side of his chest was vigorously pounded as described above. After the third attempt the patient cried out that he could feel the nut in his throat; no doubt his struggles assisted in dislodging it. Sure enough a tap could be felt on the anterior surface of the trachea, occurring with each cough or respiration. This was no doubt due to the nut moving in the current of air, and impinging on the tracheal wall or the cords. It is a well-known sign of a foreign body in the trachea and

was, I think, well described by our intern as being like a ball valve in action.

The mother refused permission for further interference in the meantime in the hope that he could cough it out. This seemed to us unlikely, but the child was left lying with his head low and making voluntary efforts to cough it out. The next day the nut was still there, and the mother gave consent for operation.

The patient had not been well behaved or co-operative, and so was given 1/12 gr. (5 mg.) morphine pre-operatively, and this enabled us to perform tracheotomy under local analgesia. The isthmus of the thyroid was divided, and a wider opening than usual made into the trachea. The nut was seen at the first expiration lodged in the lower end of the wound in the trachea. It was removed with a spoon and forceps. It was found to measure 1.75 by 1.00 by 0.75 cm. It is surprising to think that such a large body should be able to pass the cords at all. Some swelling would no doubt have taken place during the time that it was in such a damp situation, but the nut had been cooked in oil, and still showed a practically undamaged glossy surface, and so it is unlikely that it had absorbed very much fluid.

A tracheotomy tube was left in for 24 hours and penicillin continued for four days, when the patient was afebrile and active. He was discharged well with the wound practically healed at the end of seven days from the operation.

We feel that this cannot be a unique situation. We found it worrying, and though we, no doubt, were fortunate we feel that this experience might be of use to others.

It is a pleasure to acknowledge the help of my colleague, Mr. D. W. Short, in the treatment of this case and in reporting it.

—I am, etc.,

Tsinkiang. S. Fukien.

N. TUNNELL.

### The Meaning of Heart Failure

SIR,—Dr. L. Carp (*Journal*, November 25, p. 1201) reviews a series of 100 post-operative deaths in old people coming to necropsy. He states that 27 of these cases died from heart failure, next to bronchopneumonia the largest single cause of death in his surgical patients. Heart failure as a cause of death looms large in most post-operative mortality figures.

The purpose of this letter is to inquire what exactly we mean by "heart failure" following operation. Do we imply by this term that the patient's death is due to decompensation of one or both ventricles with the attendant clinical picture of systemic or pulmonary congestion, or do we, as I believe, imply that the cause of death is due to collapse of the peripheral circulation? One would like to know on what clinical or pathological grounds Dr. Carp assumes that the heart was at fault in these cases. Does he base his conclusions on the finding of "varying degrees and types of cardiac pathology" though the rest of his series showed similar lesions? These cases may have shown pulmonary oedema at necropsy, but to my mind this finding does not warrant the diagnosis of heart failure, as one would expect the same condition in vascular collapse with loss of tone in the pulmonary vessels.

Despite some experience in dealing with the problems arising during the post-operative period I cannot definitely state that I have seen one single case die primarily from heart failure. I have, however, seen many patients die from peripheral vascular collapse, particularly those cases which have been subjected to extensive surgical procedures involving considerable trauma and exposure of tissues. I feel that many, if not the majority, of deaths following operation and certified as having been due to heart failure are in reality due to peripheral vascular collapse. The fault is not in the heart but rather in the vital centres, and in particular the vasomotor centre, which is unable to cope with the stress of the operation. If the heart does fail to maintain the circulation it is only because it receives an inadequate return of blood from the systemic vessels.

Apart from the academic question of nomenclature, it is surely of great importance from the point of view of treatment that we should be clearly aware of the problems these cases present. The treatment of heart failure requires digitalis, mercurial diuretics, oxygen, and even venesection. The treatment of peripheral vascular failure requires the minimum amount of trauma and exposure at operation, the avoidance of heat loss, the maintenance of fluid and electrolyte balance, and the use of stimulants. One is the treatment of the failing heart, the other the treatment of surgical shock.