that these glands assisted the kidneys in the elimination of salt. The turtle apparently swallows more salt when feeding than the kidneys can eliminate; it therefore has to "weep" all the time to balance its electrolyte levels.—I am, etc.,

Pinner, Middx.

E. ELKAN.

REFERENCES

- ¹ Carroll, L., *Alice's Adventures in Wonderland*, 1911, chapter X.
- ² Schmidt-Nielsen, K., and Fange, R., *Nature (Lond.)*, 1958, **182**, 783.

Transport of Cardiac or Abdominal Emergencies

SIR,—The method of transport of patients suffering from cardiac or abdominal emergencies may cause in some cases death. Usually the stretcher is placed on the floor and the patient helped with difficulty on to the stretcher. Is it not possible for a stretcher to be placed on the bed under the sheet and the patient placed on to it with the minimum amount of movement before conveyance to the ambulance?—I am, etc.,

Glasgow S.2.

G. V. BOYLE.

Recovery from Drowning

SIR,—In support of the report by Drs. T. D. Kvittingen and A. Naess regarding the recovery from drowning in fresh water (May 18, p. 1315) and in reference to the leading article in the same issue (p. 1300) I would like to quote some results which I obtained from animal experiments:

Dogs subjected to 60 seconds of pulmonary flooding with fresh water by way of a tracheal cannula inhaled an average of 52 ml. of water per kg. of body weight. All the animals showed a typical arterial blood-pressure tracing with fatal circulatory failure developing at an average of 160 seconds following the beginning of the "drowning" procedure. In contrast to this, dogs treated in the same manner, but given the advantage of a "post-drowning" partial exchange transfusion (400–650 ml. of blood let from a femoral artery, 150–550 ml. of blood injected under pressure into a femoral vein) succumbed after an average of 940 seconds, the longest survival time being 3,180 seconds. It appears that this prolongation of the survival time is significant, in view of the fact that no other resuscitative measures whatsoever were employed in these experiments.

An exchange transfusion is in itself a harmless procedure. It would seem that if it is performed soon enough and in a ratio similar to that employed in the experiments it may be effective in correcting an upset electrolyte balance, in improving upon haemolysis, and in re-establishing a normal circulating blood volume.—I am, etc.,

Office of the Medical Examiner,
Baltimore, Maryland, U.S.A.

WERNER U. SPITZ.

SIR,—Dr. M. J. Pleydell (June 8, p. 1548) appears to have missed the recent interesting correspondence on oral resuscitation in the *B.M.J.* and other journals and would seem to have overlooked the splendid efforts of our first-aid organizations in correctly teaching this method together with external cardiac massage. We are all by now well aware of the Biblical references. The accounts of eighteenth-century teachings are much more interesting.

If the chest rises when air is blown into the mouth or nose, then the airway is very obviously clear, and the presence of vomit or foreign matter in the pharynx or mouth is immaterial initially, and can be cleared later. The policeman referred to was obviously correct in not

fiddling about in the casualty's mouth, provided that the chest was moving (as the casualty recovered this would have appeared to be the case). With manual methods of resuscitation it is impossible to be sure that the airway is completely clear and they are harder to teach. It has been shown on anaesthetized subjects (with artificial airways) that the mean tidal volume achieved by oral resuscitation is three times that in Holger Nielsen's method and six times that in Schafer's. It is therefore the first method of choice, the only real contraindication being where the nose and mouth of the casualty are so damaged as to prevent an airtight seal being made. If this is the case first-aiders are taught to use Silvester's or the modified Holger Nielsen's methods as alternatives.

Now that external cardiac massage is used where required, obviously the casualty should be supine, hence the advantage of the oral and Silvester's methods. If the supine patient vomits the vomit runs downhill to the back of the pharynx and can be easily cleared by turning the head to one side. The prone patient can inhale his vomit just as easily, and is in a far more difficult position for easy clearance.

Dr. Pleydell's reference to getting the patient to a safe place first is completely erroneous, as with so little time to spare it is imperative to blow some air into the patient whilst he is still in the water if necessary. The head can be tilted over a life-belt, or air blown whilst the rescuer is being hauled ashore by his lifeline. Both these aids are now at last being supplied by some go-ahead authorities around our coasts. The rescuer treading water with his victim will tend to sink with each blow but should not be deterred by this. A few good blows at this stage can be life-saving.

Let us hope that where life-saving is concerned the population will not continue to be divided into first-aiders and the public at large, but that as in Norway schoolchildren and others will be taught basic first-aid. Such excellent films as the "Pulse of Life" could well be shown on television in place of some of the melodramatic medicine to which we are presently subjected.—I am, etc.,

Mansfield, Notts.

B. S. BAKER.

SIR,—With regard to Dr. M. J. Pleydell's letter on "Recovery from Drowning" (June 8, p. 1548), I would like to point out that mouth-to-mouth and mouth-to-nose methods, with or without the use of a variety of manufactured or improvised tubes or pipes, were the recognized way of applying artificial respiration in cases of apparent death during the second half of the eighteenth century and the first half of the nineteenth. They fell into disuse when Marshall Hall introduced his prone and postural method in 1856.—I am, etc.,

Newcastle upon Tyne 4.

J. D. WHITBY.

Meclozine and Foetal Abnormalities

SIR,—In view of Mr. A. F. Burry's report (June 1, p. 1476) on the association of meclozine with foetal abnormalities, we would like to report further on a prospective study of meclozine in pregnancy which we have recently carried out in Liverpool.

We now have records of 237 infants born after 28 weeks' gestation to mothers for whom meclozine was prescribed during the first 12 weeks of pregnancy. In every case the preparation prescribed was "ancoloxin," which is a combination of meclozine and pyridoxine. Excluding one child with a vascular naevus and two children with talipes, three of these infants showed