

### Idiosyncrasy to *d*-Tubocurarine Chloride

SIR,—We have knowledge of a case similar to the first one described in the article on this subject by Drs. T. Cecil Gray and John Halton (April 24, p. 784). We feel that the term "idiosyncrasy" is a misnomer in so far that it does not explain the mechanism operating. Recalling the close analogy between curarization and myasthenia gravis and the great tendency of cases of the latter to respiratory failure, it is reasonable to draw the inference that the action of curare is greater on the intrinsic and extrinsic respiratory musculature than on the rest of the musculature of the body.

Both Prescott and Organe<sup>1</sup> suggest and offer evidence that bronchospasm may occur when intubation is performed in a curarized patient. Prescott also stresses the initial action of curare on the brain stem, which controls vagal activity. As Organe has shown that bronchoscopy in the curarized patient does not predispose to cardiovascular failure, we are then forced to the conclusion that these deaths have their origin within the respiratory system.

The blocking of the normal neuromuscular response at the vagal nerve endings within the bronchi (Hering-Breuer reflex) by curare must exert a profound influence on the mechanism of respiration, and is closely analogous to an acute attack of myasthenia gravis, exhibiting similar symptomatology and complications. Even if we do not invoke the hypothesis of a possible bronchospasm, we have to recognize that the passage of tube or bronchoscope into air passages that are in a state of areflexia will not give rise to the expiratory effort associated with normal intubation, and we have no guarantee that the normal mechanism will return in a patient already suffering from some initial degree of respiratory obstruction such as might be caused by a carcinoma of the bronchus.

It is to be noted that the second case quoted by Gray and Halton showed no signs of respiratory obstruction and recovered. We feel therefore that the question of "idiosyncrasy" can be explained on normal physiological grounds. Furthermore, it appears to us debatable whether curare should be used in bronchoscopies if there is any evidence of respiratory obstruction.—We are, etc.,

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#### REFERENCE

<sup>1</sup> *Proc. R. Soc. Med.*, 1947, **40**, 593.

### Curare and Bronchial Spasm

SIR,—The use of *d*-tubocurarine chloride and thiopentone anaesthesia for bronchoscopy seems to have become a fairly well-recognized method. It has often occurred to me that the combined use in this technique of a drug which depresses the respiratory centre together with a drug which has the capacity to paralyse the respiratory muscles involves considerable danger, as it is impossible to inflate the lungs with oxygen during the procedure and the only alternative, which is to insufflate oxygen through the side tube of the bronchoscope, is far from satisfactory. In addition, most of the patients who are sent to us for bronchoscopy are in poor physical condition and are unlikely to withstand any degree of anoxia. I have used this method for some time without misfortune, but I now feel obliged to give an account of a recent experience.

The patient, a man of 67, was admitted to hospital complaining of lassitude, dyspnoea, and a productive cough. His exercise tolerance was very poor and there was slight orthopnoea. Arteriosclerosis was marked, the heart was considerably enlarged to the left, and the blood pressure was 190/120. There had been some attacks of precordial pain. He was found to have a pleural effusion on the right side and he was running an intermittent pyrexia. A bronchial carcinoma was suspected.

He was given morphine gr. 1/6 (11 mg.) and atropine gr. 1/100 (0.65 mg.) one hour pre-operatively. Pharynx and larynx were sprayed with 2 ml. of 2% amethocaine. A mixture consisting of nikethamide 4 ml., "prostigmin" 5 mg., atropine 1/100 gr., was prepared in one syringe. A No. 8 Magill tube of suitable length was lubricated and an endotracheal connexion fitted, in case of an emergency. A Gordh needle was inserted into a vein and fixed in position. *d*-Tubocurarine chloride, 15 mg., was administered, and this was followed after a three-minute pause by thiopentone, 0.4 g. The respirations were quiet and regular. When the surgeon introduced the laryngoscope a slight spasm of the true vocal cords

developed. After a further 0.1 g. thiopentone had been given the bronchoscope was passed easily. All respiratory movement ceased. The thorax was compressed a few times while the surgeon withdrew the bronchoscope from the right main bronchus into the trachea. The pulse volume became weak quite suddenly and slight cyanosis developed. The bronchoscope was withdrawn and a Magill tube passed. No time was wasted during this procedure, but by the time the tube was in position the patient was grey and pulseless, and I have a vivid recollection of a grey pharynx with the cords in the cadaveric position.

The mixture of nikethamide, prostigmin, and atropine was administered easily through the Gordh needle, while continued unsuccessful attempts were made to oxygenate the patient by bag pressure from a Boyle's machine, and I wish to stress the fact that *it was quite impossible to inflate the patient's lungs*. No heart beat could be detected. While an attempt was being made to perform cardiac puncture one inspiratory "twitch" of the diaphragm was seen, and from that moment the lungs could be inflated easily. The pulse returned immediately with good volume, and his colour improved rapidly. The patient's first attempts at spontaneous respiration were in the form of Cheyne-Stokes respiration. He was returned to the ward 55 minutes after the commencement of anaesthesia, and oxygen was administered from a B.L.B. mask. When examined 30 minutes later a left facial palsy was detected, and all the signs of a spastic paraplegia, with increased tendon reflexes, positive Babinski, and clonus on both sides, were evident. A cerebral thrombosis was suspected. Nicotinic acid was administered intravenously and intramuscularly. By evening he had recovered almost completely. The following morning his only complaint, apart from "not feeling too good," was of slight precordial pain. All neurological signs had disappeared. He was discharged from hospital after seven days.

While there were no gross signs of cardiac failure before bronchoscopy, it is obvious from the history that the cardiac reserve was small, and it is likely that there were marked atheromatous changes in the coronary arteries. With the added effect on the myocardium of toxic absorption from the affected lung it is not surprising that a short period of anoxia was sufficient to produce cardiac failure. The cerebral changes were presumably anoxic in origin. It seems certain therefore that the dose of *d*-tubocurarine chloride should have been considerably reduced, or the use of this drug dispensed with altogether. It was, however, surprising and disturbing that even when the patient was in extremis, flaccid and grey, it was impossible to force oxygen into the lungs. I feel certain that I was dealing with a spasm of the smaller bronchioles, as at that stage no striped muscle could possibly have resisted attempts to ventilate the lungs. Whether this hypothetical spasm was due to curare or to thiopentone, or to some other factor, I am not competent to judge.—I am, etc.,

Manchester.

MICHAEL M. BOYLE.

### Erythroblastosis and Kernicterus

SIR,—The annotation on erythroblastosis and kernicterus (May 1, p. 843) must not pass without comment lest it be assumed by readers not engaged in this work that the theories there outlined are founded on accepted facts. Surely the annotation is wrong in stating that the staining of nerve cells causes their degeneration. It is generally accepted that the sequence of events is, first, damage to and degeneration of the nerve cells and, secondly, icteric staining of the damaged nerve tissue by circulating pigment; this is entirely analogous to the coloration of cerebral lesions by vital staining in experimental animals.

The hypothesis that the different clinical varieties of haemolytic disease are explicable on the grounds of differences in the quality of the maternal iso-antibodies is not borne out by a study of a large series of cases. In my experience the type of foetal disease cannot be predicted with certainty by determination of the quality of the maternal antibodies. The most that can be said is that a high titre of blocking antibodies is likely to be associated with hydrops foetalis and still-birth. In a recent publication on this subject I gave illustrative case histories in which the lack of correspondence between type of antibody and foetal disease is clearly shown (Cappell, 1947).

Wiener's theory that icterus gravis neonatorum is due solely to anti-Rh agglutinins which are "milked into the foetal circulation in the course of labour" is a piece of arm-chair philosophy which is accepted by no competent pathologist experienced in this work (cf. Potter, 1947). If it were true it would be possible to prevent icterus gravis by caesarean birth

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—a possibility unfortunately abundantly refuted by experience. The statement that the changes of icterus gravis are due to agglutinative thrombi in the vessels of liver, bone marrow, and brain is only an attractive speculation which is, unfortunately, divorced from reality and is in direct conflict with all the morbid anatomy of the disease. The post-mortem appearances provide unmistakable evidence of long-continued pre-natal haemolysis, and the extra-medullary haemopoiesis which is so conspicuous a feature of many cases cannot conceivably have developed only after birth.

In conclusion I can only agree with the last sentence of your annotation, but this is just what the American writers cited have failed to do; instead they have promulgated a theory based on pure speculation without a shred of clinical or pathological evidence to support it.—I am, etc.,

The University, Glasgow.

D. F. CAPPELL.

#### REFERENCES

- Cappell, D. F. (1947). *Brain*, 70, 486.  
Potter, E. L. (1947). *Rh.* H. K. Lewis, London.

### Iridocyclitis Treated with Benadryl

SIR.—I found the letters of Dr. Barbara Shaw (Feb. 7, p. 277) and Dr. J. Moss (Feb. 21, p. 367) on this subject interesting. A patient of mine here, an ex-naval officer, has had recurrent attacks of iridocyclitis for many years and has seen several specialists in addition to many general practitioners.

As the condition always occurred in the right eye only, and dated from his service in submarines during the Kaiser's war, he always referred to it as "periscope eye." I usually relied on atropine and heat, but the various specialists have advised a very varied range of treatment, from arsenicals and pot. iod. to colonic irrigation, prostatic massage, and injections of milk! Last year he had an attack which I treated for a short time with sulphapyridine, but as there was no obvious response I put him on to injections of "acetylarsan" and emetine. This attack lasted for 12 days and was the shortest he had had then.

This month he surprised us all by a fresh attack, but in the left eye for the first time on record, which rather upset the periscope aetiology. I was afraid that occurring in a new eye it might be more severe than before, but I treated it with atropine and hot spoon bathing as before, emetine and acetylarsan, and "benadryl" in addition. This attack is the shortest he has had, and he was clear in nine days this time. I cannot say for certain whether the benadryl actually shortened the time, but its soothing and soporific effect was a great help and the patient appreciated it very much.

The rationale of emetine is that he has suffered in the past from dysentery, and in this colony a great percentage of people sooner or later suffer from chronic amoebiasis and require emetine periodically.—I am, etc.,

Nanyuki, Kenya Colony.

G. DUNDERDALE.

### Barium Enema and Acute Intussusception

SIR.—Drs. Brenda Morrison and Donald Court are to be congratulated on their excellent account of "Acute Intussusception in Childhood" (April 24, p. 776), but as stated in the annotation (p. 794) "some may differ from them" on their attitude to barium enemata as an aid to diagnosis and as a method of treatment.

As quoted by Morrison and Court, the papers by Nordentoft,<sup>1</sup> Nyborg,<sup>2</sup> and Hipsley<sup>3</sup> show that the barium enema can be of great value both in diagnosis and treatment of early acute intussusception.

In two such cases which I saw as surgical registrar at the King George Hospital, Ilford, barium enemata were found to be of value.

Case 1. A well-nourished baby boy, aged 7 months, was admitted 14 to 15 hours after the onset of what seemed to be spasmodic abdominal pain. There was no vomiting, nor was there any blood detected on rectal examination; while the abdomen, though carefully palpated, held no definite lump.

An enema was slowly administered, under anaesthesia, using a very thin mixture of barium; the progress of the barium was followed by viewing with a screen, and the invaginated loop of ileum was clearly seen to "unfold" itself as far as the ileocaecal junction, when the ileum seemed to "jerk" itself back to its normal position. Two days later the child was home, fully recovered.

Case 2. This child was also suspected of having an early (18 hours) acute intussusception, but again the signs were not sufficient to warrant operation. A barium enema confirmed the diagnosis,

and also appeared to reduce the intussusception, though no "jerk" was seen. In this case, however, pain and vomiting recurred after a short interval, and at laparotomy an early ileo-caecal intussusception was found. Reduction in the usual way was followed by uneventful recovery.

These cases illustrate how a barium enema can be of value in diagnosis in the early stages of intussusception, and when the classic picture is not presented. In Case 1 it was of obvious value as a mode of treatment. Though a failure as treatment in Case 2, the diagnosis was confirmed and no harm resulted.

In this way early cases can be diagnosed, instead of being allowed to become late cases by the "wait and watch" method of observation; whilst in addition to the diagnosis being made the condition may be cured at the same time—thus making operation unnecessary. According to Babcock<sup>4</sup> 60% of intussusceptions are reducible in the first 24 hours by hydrostatic pressure.—I am, etc.,

London, N.W.6.

PHILIP HOPKINS.

#### REFERENCES

- <sup>1</sup> *Acta radiol., Stockh.*, 1943, 24, 484.  
<sup>2</sup> *Acta chir. scand.*, Supp. 80, 1943, 89, 1.  
<sup>3</sup> *Surgery*, 1937, 1, 825.  
<sup>4</sup> *Text Book of Surgery*, 1935. W. B. Saunders: Philadelphia and London.

### Late News

SIR.—Being a weekly issue, the *Journal* is at times necessarily a week and more behindhand with medical news of importance to members. This delay is added to when the *B.M.J.* is not delivered by post till Monday or even later. And so the daily lay press gets in first with some selected snippet of news which reaches client or patient casually before the doctor to whom in these anxious days it may be of the first importance. What has taken place at Council or R.B. meetings, or at local meetings, or what emanates from a Government department, he gets late, perhaps when already stale.

Members, being widely scattered, depend upon the *Journal* for ungarbled facts for which they have to wait impatiently. In these days, when things move so fast, could not a column or part of one be given in the *Supplement*, whose news looms greater in importance than ever before, in the form of a "Latest News Summary" framed by the publicity department of the Association under the watchful eye of the Editor; this to publish happenings from local as well as Headquarters sources? —I am, etc.,

Bournemouth.

S. WATSON SMITH.

### Association of Medical Records Officers

SIR.—The need to improve the techniques of medical record keeping has frequently been a subject of discussion, but until comparatively recently little organized action has been taken. Whilst it is recognized that the standard of clinical records is and must remain a medical responsibility, it is thought that this responsibility could be lightened, and medical time and expense saved, by the provision of trained lay assistants. With this end in view an Association of Medical Records Officers has now been inaugurated and it is felt that the medical profession will give their co-operation and guidance whenever it is sought, as they have always done in such matters in the past. Two of the Association's aims are:

(1) To promote the development of techniques in medical record keeping, to diffuse among the members and others all information and technical and general knowledge from time to time available regarding the keeping of medical records or of use in connexion therewith.

(2) To provide opportunities by means of lectures, discussions, or other intercourse among the members for the exchange of information and opinions regarding the method, processes, and technique of medical record keeping.

Training courses for lay personnel already responsible for medical records are being organized in several of the Regions as an interim measure preparatory to a more comprehensive scheme of training. Records officers interested in these training courses and in membership of the Association are invited to get in touch with the honorary secretary.—We are, etc.,

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