adherent to the oesophagus. When the neuroma was dissected away the oesophagus filled out but none the less dilators were passed.

The "neuroma" had a cotton ligature incorporated in it. Since then I have ligated only the distal vagal end, sometimes burying it under a serosal suture to obviate (?) such stump neuromata.

The patient has had no recurrence of symptoms since. This case tends to support the view that stump neuromata may by themselves cause symptoms as suggested in your leader.—I am, etc.,

University College,
Galway.

E. N. MACDERMOTT.

REFERENCE

- ¹ Guiney, E. J., and MacDermott, E. N., *J. int. Coll. Surg.*, 1960, **33**, 297.

Prolonged Latent Period with *Plasmodium falciparum* Infections

SIR,—The letter from Dr. A. Mahmood (26 February, p. 544) reporting a recrudescence of *Plasmodium falciparum* infection in a pregnant Nigerian 16 months after leaving her country coincides with a similar case here. The lady is a Nigerian primipara, five months pregnant, who left Nigeria in March 1964. Her age is 20 years, her haemoglobin 6.8 g./100 ml., and her M.C.H.C. 27%. Her faeces shows a few *Entamoeba histolytica* cysts and a considerable number of *Ankylostoma* ova. Scanty ring forms but no gametocytes of *P. falciparum* have been found in the blood smear, which is routinely done when the haemoglobin is low. The interval between finding these parasites and the patient leaving Nigeria is over 20 months.—I am, etc.,

Devonport Laboratory,
London S.E.10.

G. L. ROBINSON.

Tonsillectomy

SIR,—The article by Dr. H. B. Holden and Dr. J. J. Maher (4 December, p. 1349) comparing blood loss in adenotonsillectomy under ether and halothane anaesthesia plus the numerous ensuing letters on tonsillectomy make interesting reading.

Dr. R. I. W. Ballantine (12 March, p. 676) makes the point that reflex disturbances can occur with light anaesthesia, but in neither the original article nor in later observations does the question of blood loss appear to have been considered in relationship to depth of anaesthesia.

Perhaps depth of anaesthesia plays a larger part in blood loss than is widely recognized. In 1955–7, to settle a difference of opinion on the conflicting claims for deep or light anaesthesia in dissection tonsillectomy with adenoidectomy, Mr. P. H. Golding Wood and I did a carefully controlled (unpublished) series of over 100 cases aged 5–8 years, all with the same team. We compared blood loss under deep ether and under light ether barely deep enough to tolerate the Boyle-Davis gag. Swabs were weighed and sucked blood measured. The operating conditions were better under deep ether, and this group lost on average approximately half the amount of blood of the group under light ether. We also compared a smaller number using suxamethonium

chloride, an endotracheal tube, trichloroethylene, and very small doses of gallamine. These gave similar blood loss results to the light ether group.

It would be of interest to know comparable blood loss figures with anaesthesia as light as Dr. E. V. Slaughter's ½% halothane and with halothane at an appreciably greater depth. It would also be instructive to compare the number of cases causing anxiety on extubation under these same conditions.

Mr. P. H. Golding Wood and I have, as a routine, largely discarded deep ether and the simple insufflating Boyle-Davis-gag technique only because, (1) induction is time-consuming, working single-handed, and operating and waiting-lists are long; (2) potential dangers arise if cautery or diathermy is used in following cases; and (3) the soporific effect on personnel is accentuated in a small hot operating theatre.

A few more factual series with strict controls would help give real perspective and perhaps do away with much conjecture and the often misleading personal opinion. My own preconceived notions were certainly proved wrong on the subject of adenotonsillectomy blood loss under light and deep ether.—I am, etc.,

Harrietsham,
Nr. Maidstone,
Kent.

C. H. BOYD.

SIR,—We have read with great interest all the recent correspondence concerning tonsillectomy and anaesthesia. With particular reference to Dr. D. C. Hughes's letter (19 February, p. 483), it may be of some interest to readers to learn that at St. James's Hospital, using endotracheal anaesthesia and the Doughty modification of the Boyle-Davis gag, we have measured the blood loss in 50 consecutive children under the age of 10 years.

The average blood loss for the 50 cases was 70 ml., as compared with the 128 ml. of the 50 cases studied by Holden and Maher.¹

The average blood loss for 30 adult tonsillectomies was 106 ml.

The presence of blood in the oropharynx as in tonsillectomy is an absolute indication for intubation, and the advantages are to the benefit of the patient, the surgeon, and the ward staff.—We are, etc.,

J. A. CLARKE.

St. James's Hospital,
London S.W.12.

A. W. HALFHIDE.

REFERENCE

- ¹ Holden, H. B., and Maher, J. J., *Brit. med. J.*, 1965, **2**, 1349.

Cot Deaths

SIR,—As a coroner I am of course concerned with the question of cot deaths, and one possibility which appears to have been omitted from every investigation is the possibility of an ante-mortem fall in body temperature.

In many cases the child has been in a cold bedroom or in a pram in the open air when it is found dead.

Investigation by the coroner into the question of room temperature or air temperature might be useful, but even more useful, particularly where the time of death can be approximately determined by other evidence,

would be a recording of the body temperature with a subclinical thermometer taken by the first doctor or nurse to see the body after death.—I am, etc.,

Stoke-on-Trent.

F. G. HAILS.

Contact Dermatitis from Spandex Yarn

SIR,—I was most interested to read about brassière dermatitis due to Spandex yarn in the letter from Dr. C. F. Allenby, Dr. V. Kirton, Dr. K. D. Crow, and Dr. D. Munro-Ashman (12 March, p. 674). I have investigated over the past few months four similar cases, all of whom had positive patch tests to Spandex. Three of these developed the dermatitis after approximately one month of wearing the brassière, the fourth within 24 hours, but the patient had been employed by the firm manufacturing the brassière, and presumably she had become sensitized to the antioxidant at work.

It seems likely that this type of dermatitis will become increasingly common with the widespread use of synthetic yarns.—I am, etc.,

Western Infirmary,
Glasgow W.1.

W. N. MORLEY.

Albustix Test for Urine Protein

SIR,—I refer to the letters by Dr. Phyllis Dagnall (4 December, p. 1369) and Dr. R. M. Emrys-Roberts (12 March, p. 677) on the subject of Albustix for detection of urinary protein. We have found that Albustix and Uristix frequently give false positives, so that in our routine testing in hospital the heat or salicyl sulphonic acid test is always applied when positives are obtained by the "stix" test.

However, I believe Dr. Emrys-Roberts is basing his false negative assertion on the false premise that the presence of proteinuria is a good screening test for urinary infection. It is common for urinary infection to be present in the complete absence of protein in the urine by the usual methods of detection, so that it is quite wrong to confirm or refute the existence of urinary tract infection on the basis of any test for the presence of protein alone.—I am, etc.,

DENIS M. FREEMAN.

Warrington General
Hospital,
Warrington.

Skin Pigmentation by Phenindione

SIR,—Dr. N. H. Silverton's interesting letter (12 March, p. 675) prompts me to report my personal experience of this peculiar phenomenon. I have been taking this drug in varying dosage for some ten months, and within the past three months have noticed recurrent pigmentation, presenting as circumscribed bright orange patches on the centre of the left palm and less commonly on the distal finger tips of right thumb and index finger.

I have confirmed that this can be produced by contact with the drug plus soapy water, though this combination had not previously appeared significant to me.

I had noticed that this pigment occurred when using half tablets and it appeared to be

of external origin. I also noted similar oral pigmentation from this drug and confirmed that hand pigment could be produced by drug plus saliva. When breaking a 50-mg. tablet it was uncommon to get a clean break and I therefore attempted to obtain a proper half and kept it for a later dose; the first crumbled half was ingested by lifting the main portion with right thumb and index finger and the remainder by licking it off the palm. The occasional pigment on the fingers was presumably due to saliva in contact with powdered drug under the nails.

In Dr. Silvertown's case the absence of pigment on the left middle finger may possibly be explained by the fact that it was simply in contact with the dry surface of an unbroken tablet.

It seems probable that pigmentation from phenindione is produced by combined contact of alkali and the drug. This would explain the pigmentation on the hands and in the mouth, and its more common appear-

ance with the use of broken tablets, permitting easier combination of alkaline solution with powdered drug. It may also be relevant to urinary pigment, which is often spasmodic and may again depend on alkalinity. The skin pigment can be removed by prompt washing, but even after drying some minor degree can be reproduced by further application of saliva.

If not promptly removed the pigment can be quite adherent and embarrassing.

It is interesting to speculate about the possibility of this alkaline-drug combination as a factor in the more serious drug reactions to phenindione, including rashes, pyrexia, neutropenia, and liver and renal damage.

This contact pigmentation could be reduced or eliminated, and at the same time a more accurate dosage ensured by the use of the 25-mg. tablet.—I am, etc.,

Belfast City Hospital,
Belfast 9.

J. JEFFERSON.

Chloroquine Psychosis

SIR,—Chloroquine has been used in the treatment of discoid lupus erythematosus following the successful use of quinacrine by Prokoptchouk¹ in 1940 in Russia, and in England by Page² in 1951.

Unfortunately it has become clear that there are many undesirable side-effects associated with the antimalarials. Among them are anorexia and nausea, skin eruptions of many types, including a lichenoid reaction, pigmentary changes (especially bleaching of hair), aplastic anaemia, chronic porphyria, and corneal opacity and retinopathy.³ Toxic psychosis, depression, and polyneuritis have been reported usually due to mepacrine. Sapp⁴ reports a case due to chloroquine, and refers to reports of five other patients who developed mental disturbance while taking chloroquine.

The purpose of this communication is to report a further case of this complication of chloroquine treatment.

The patient, a man of 59 years, was attending the Skin Hospital for treatment of a patch of atrophic alopecia on the vertex of the scalp. This was 4 in. (10 cm.) in diameter, and had gradually reached that size since the onset eight years previously. There were pustules at the periphery of the lesion. This was diagnosed as folliculitis decalvans.⁵ Because of the lack of response to antibiotics and local steroid therapy, and the resemblance of this condition to discoid lupus erythematosus of the scalp, treatment was started with chloroquine, 250 mg. b.d. He took

the tablets for three weeks without ill-effect, then he was sick one morning and felt mentally depressed. He continued in his work as a security officer at a power station, but it was found that he was completing his report sheets incorrectly, putting figures under the wrong headings and sometimes reversing the correct sequence. Another example of his abnormal behaviour was that he went home and attempted to make a cup of coffee, but when the kettle boiled he carried it to the bathroom and poured it down the sink. He was aware that he was acting abnormally. He comments that he had to concentrate a great deal before performing a task which previously would have required very little thought.

At this stage he remembered that he had been unwell five years before, after taking tablets that had been prescribed for his patch of baldness. He therefore stopped the chloroquine, and during the following week he became quite well again. During the period he was taking chloroquine he did not notice any difficulty with his eyesight, and examination of the retina did not show any abnormality. He thinks that the chloroquine helped the alopecia.

The records of his treatment five years before at another hospital were obtained, and these showed that the tablets which upset him at that time were chloroquine and mepacrine. He only remembers that the tablets nauseated him when he took them at that time.

The Table summarizes this case and cases reported previously. It will be seen that with the exception of one case the dose of chloroquine taken before the signs of intolerance

developed was about 4 g. This form of intolerance to chloroquine seems rare, though it is notable that over 300 cases of psychosis attributed to the related drug mepacrine have been reported.

All the patients had similar symptoms, becoming confused and agitated, but with some insight into their condition in the early stages. All recovered after stopping the drug, usually after a period of about a week. Apart from stopping the drug and giving sedation the other treatment which has been suggested is the acidification of the urine as this increases urinary excretion.

I wish to thank Dr. M. Garretts and Dr. J. M. M. Young for their assistance with this report.

—I am, etc.,

D. B. BROOKES.

The Manchester and Salford
Skin Hospital,
Manchester 3.

REFERENCES

- 1 Prokoptchouk, A. J., *Zbl. Haut- u. Geschl.-Kr.*, 1940, 66, 112.
- 2 Page, F., *Lancet*, 1951, 2, 755.
- 3 Merwin, C. F., and Winkelmann, R. K., *Mayo Clin. Proc.*, 1962, 37, 253.
- 4 Sapp, O. L., *J. Amer. med. Ass.*, 1964, 187, 373.
- 5 Grünfeld, R. L., *Arch. Derm. Syph. (Chic.)*, 1909, 95, 331.
- 6 Rab, S. M., *Brit. med. J.*, 1963, 1, 1275.
- 7 Dubois, E. L., *Ann. intern. Med.*, 1956, 45, 163.
- 8 Burrell, Z. L., jun., and Martinez, A. C., *New Engl. J. Med.*, 1958, 258, 798.
- 9 Mustakallio, K. K., Putkonen, T., and Pihkanen, T. A., *Lancet*, 1962, 2, 1387.
- 10 Dornhorst, A. C., and Robinson, B. F., *ibid.*, 1963, 1, 108.

Pain in the Neck and Arm

SIR,—We read with great interest the paper "Pain in the Neck and Arm: Multi-centric Trial of Physiotherapy" (29 January, p. 253). It is gratifying to note that the effects of various forms of treatment and placebo are more or less identical, and that postural correction with assurance from the physiotherapist was found to be very helpful. There has been, however, no attempt to pinpoint the diagnosis. It appears that the cases selected for treatment included cervical spondylosis, myelopathies, root compression from foraminal encroachment, and costoclavicular compression without any radiological abnormality; neck pain being present in all.

A good number of such cases in our experience have been found to be due to fibrositis, with clinically palpable tender nodules in different planes of the muscles suspending the girdle. These cases are cured, even in presence of gross degenerative change in the cervical spine or of a cervical rib, when the nodules are treated with local infiltration, heat, deep massage, short-wave diathermy, ultrasonic therapy, etc., followed by intensive girdle muscle exercises. The last obviously helps to correct the posture of the girdle. None of these cases required cervical traction or a collar.

This leads to the question whether the brachial neuropathy could be secondary to girdle drop due to atrophy and power insufficiency of the muscles from pain. Should not these cases be labelled as fibrositis with secondary costoclavicular compression? —We are, etc.,

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Medical College,
Calcutta.

A. K. SAHA.

Institute of Child Health,
Calcutta.

A. SENGUPTA.

Cases of Chloroquine Psychosis Published Previously and Present Case

Report	Form of Chloroquine	Condition being Treated	Dose	Total Dose	Time of Onset	Mental State
1 Present case	Phosphate	Discoid L.E.	250 mg. b.d.	5 g.	20 days	Confused state
2 Sapp ⁴	"	Amoebic dysentery	Reducing to 250 mg. b.d.	4 "	6 "	Agitation, hallucinations
3 Rab ⁶	Sulphate	Amoebic hepatitis	250 mg. q.i.d.	6 "	6 "	Confused, violent
4 —	"	" "	250 "	6 "	6 "	Confused, aggressive
5 Dubois ⁷	—	Systemic L.E.	0.5 g. daily	—	—	Personality change
6 Burrell ⁸	—	Cardiac arrhythmia	1 g. daily increasing	—	—	Psychosis
7 Mustakallio ⁹	—	Solar dermatitis	—	4.7 g.	40 days	Depersonalization, aggression
8 Dornhorst & Robinson ¹⁰	Sulphate	Rheumatoid arthritis	Daily 600 mg.	2.4 "	4 "	Agitated, confused, deluded