has to be calculated from the erythrocyte counts and the haematocrit.

Studies on 500 healthy persons indicate that the older age groups, regardless of sex, have higher M.C.V. than the younger age groups. It is quite conceivable that anoxia produced by chronic lung troubles in older age groups, though asymptomatic clinically, may have produced larger M.C.V., as has been observed by Surgeon Commander Lambert and Mr. Morris, who stated smokers have larger M.C.V. than non-smokers. I am puzzled, however, by the fact that there is no sex difference in the studies done here. It appears to me that there are more smokers in the male group than in the female group (and therefore the M.C.V. should be larger in the male than in the female group). No age differences were observed of haemoglobin or haematocrit values by our studies.

The M.V.C. of 500 Healthy Individuals According to Sex and Age Groups

Age Group	Male	Female
16-19 ..	89.5 ± 8.6	89.6 ± 7.6
20-29 ..	90.0 ± 8.7	90.4 ± 8.9
30-39 ..	91.9 ± 6.7	91.2 ± 12.4
40-49 ..	92.5 ± 9.4	91.6 ± 8.7
50 and above	93.0 ± 10.3	93.1 ± 8.7
Average ..	91.4 ± 9.2	91.3 ± 9.4

Each group consists of 50 individuals.

The Difference of the M.C.V. in Different Age Groups

Age Group	16-19	20-29	30-39	40-49	50 and above
16-19	d: 0.46 t: 0.528 p > 0.5				
20-29		d: 1.90 t: 2.429 p > 0.02			
30-39			d: 0.66 t: 0.801 p > 0.4		
40-49				d: 0.48 t: 0.481 p > 0.8	
50 and above					d: 0.48 t: 0.481 p > 0.8

Each group consists of 50 healthy male individuals.
d: Difference of the means.
t: Student's t
p: Probability

These studies also indicate that the M.C.V. by the Coulter S is higher than the generally accepted values: 82-92 μ^3 ,² or 76-96 μ^3 .³ The larger M.C.V. values by the Coulter S have also been observed recently by Silver and Frankel.⁴ Their values range 83.6 to 99.2 μ^3 on 200 determinations of male and female blood donors and student nurses. The lower M.C.V. values by the manual methods appear to be due to less precise determinations of the erythrocyte counts.—I am, etc.,

TAKASHI OKUNO

Lutheran General Hospital and
School of Medicine,
University of Illinois,
U.S.A.

- 1 Sharp, A. A., and Ballard, B. C. D., *Journal of Clinical Pathology*, 1970, 23, 327.
- 2 Wintrobe, M. M., *Clinical Hematology*, 6th edn. Philadelphia, Lea and Febiger, 1967.
- 3 DeGruchy, G. C., *Clinical Hematology in Medical Practice*, 2nd edn. Philadelphia, F. A. Davis, 1964.
- 4 Silver, H., and Frankel, S., *American Journal of Clinical Pathology*, 1971, 55, 438.

Mandarin Nail Syndrome

SIR,—From time to time changes in cosmetic practice bring their own bad effects on the hair, skin, and nails to those who follow the current trends. Recently I have seen several patients, both young and older women, who present with painful lesions of one or more nail beds, generally associated with some discoloration extending in variable distances from the free margin of the nail to the lunular. At times the nail plates are shed.

This is often mistaken for an infection of the nail plate by fungus, yeast, or mould, though no micro-organisms are recovered. Needless to say, systemic or local treatment will not help in any way, because the changes are brought about through purely mechanical means. The long nail acts as a lever and promotes a force great enough to rupture the connexion between the nail bed and the nail plate, and often produces small haemorrhages as well. This process is frequently repeated, and the separation of the nail plate from the bed progresses until the nail may be lost.

The treatment is obvious: the nail should be cut very short to minimize further damage to the nail bed. Filing should be avoided, and the patient reassured that the nails will grow out normally when they are given a chance.—I am, etc.,

E. J. MOYNAHAN

Guy's Hospital,
London S.E.1

Action of Disodium Cromoglycate

SIR,—In a recent review of the possible mechanisms of action of disodium cromoglycate Cox¹ has pointed out that a conflict of opinion exists concerning the ability of the drug to alter the sensitivity of the airways of asthmatic subjects to challenge with histamine. Altounyan² in adults and Dickson³ in children have both shown that the fall in forced expiratory volume in one second (FEV₁) after a histamine aerosol was diminished after a period of regular treatment with disodium cromoglycate. Recently, however, Ryo and colleagues⁴ failed to demonstrate any significant effect when the drug was given either chronically or acutely before histamine challenge in adult asthmatics. I have obtained similar evidence in childhood asthmatics who were being investigated during a clinical trial of disodium cromoglycate.

Forty asthmatic children who had taken no drugs for the previous eight hours each inhaled histamine acid phosphate solution (0.03 or 0.1%, according to previously determined sensitivity) for two minutes from a Wright's nebulizer. FEV₁ was measured before and at ½-1 minute intervals after the challenge. When the FEV₁ had returned to the initial value a capsule was administered in a single-blind fashion, either of disodium cromoglycate or of a placebo (lactose with sodium sulphate). After 10 minutes histamine challenge was repeated. Histamine sensitivity was diminished both by disodium cromoglycate and by placebo (see Table) but the difference between the two forms of treatment was not significant. There was a diminution in the fall in FEV₁ of 35% after placebo and of 34% after disodium cromoglycate. Thus the effect of disodium cromoglycate was no greater than the effect of a placebo.

Mean Fall in FEV₁ (%) after Histamine Aerosol

Control	Placebo	Control	D.S.C.G.
46.0	30.0	34.0	22.5
t = 3.22 p < 0.01		t = 3.96 n = 33 p < 0.001	

The results of this study and that of Ryo and colleagues⁴ differ from those of Altounyan² and Dickson,³ suggesting that there may be a difference between the modes of action of disodium cromoglycate given acutely and chronically. The present study also differs from that of Kerr and his colleagues,⁵ who found that the effect of intravenous histamine on airways was diminished by disodium cromoglycate. This would suggest that the mechanism of action of intravenous histamine on the lung is different from that of the inhaled drug, and that it might be more profitable to explore this difference than to assume, as do Kerr and his colleagues,⁵ that a difference does not exist.—I am, etc.,

M. SILVERMAN

Department of Paediatrics,
Institute of Diseases of the Chest,
London S.W.3

- 1 Cox, J. S. G., *British Journal of Diseases of the Chest*, 1971, 65, 189.
- 2 Altounyan, R. E. C., in *Disodium Cromoglycate in Allergic Airways Disease*, ed. J. Pepys, and A. W. Frankland. London, Butterworths, 1970.
- 3 Dickson, W., in *Disodium Cromoglycate in Allergic Airways Disease*, ed. J. Pepys, and A. W. Frankland. London, Butterworths, 1970.
- 4 Ryo, U. Y., Kang, B., and Townley, R. S., *Journal of Allergy*, 1971, 47, 96.
- 5 Kerr, J. W., Govindaraj, M., and Patel, K. R., *British Medical Journal*, 1970, 2, 139.

Head Injuries in Children

SIR,—From the prominence devoted to benign intracranial hypertension in your leading article (22 January, p. 196) it is clear that you consider this condition to have a close relationship with head injury. The reasons for your belief have not been given. Scant support for it is to be found in Grant's paper¹ from which you quote. The contention that air studies are unnecessary in children with benign intracranial hypertension begs the question, for how can a firm diagnosis be made without the measurement of intraventricular pressure and gas replacement?

Dr. J. H. Burkinshaw (5 February, p. 378) raises other issues. Of course clinical observation of the head-injured patient is of vital importance, but skull radiographs may give useful information which cannot be obtained by other means. In particular, it must be stressed that anticipation of complications after head injury is more than half the battle, and anything which helps is to be welcomed. One of Dr. Burkinshaw's two (and only two) indications for routine skull radiography is "to confirm a clinical diagnosis of depressed fracture of more than trivial degree." This is dangerous stuff. Very occasionally there may be an obvious dent in the head over a depressed fracture, but much more commonly there is a haematoma which effectively conceals what is underneath. Why can routine skull radiography help in management? The following are a few conditions which can be demonstrated by this investigation:

(1) A fracture line crossing the course of a meningeal artery or dural venous sinus. In