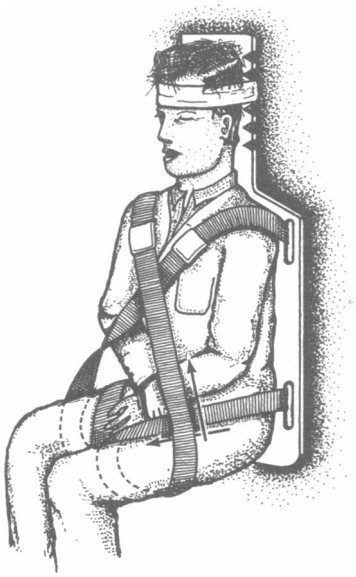
collar. The board is then slid gently behind the patient, making sure that the lower end is well below the level of the sacrum. The two Britax straps are passed through the upper handholds, behind the board, out from the lower handholds, and around the patient's thigh from the outside to the inside, and then under and over the thigh to the chest buckle (Fig. 2). The straps must



be applied as high as possible in the groin. The forehead can be held in position by triangular bandages or a Velcro type band. The arms are normally outside the straps, and not as shown.

The injured and the board now being one unit, any movements for extricating the patient will not worsen a spinal injury. It sometimes helps to tie the ankles together and to have them supported by a rescuer if fractures have occurred below the knee. The handholds in the board are useful for lifting purposes but within the Road Accident After Care Scheme the "blanket lift" is used with the short spinal board.[2] Once the casualty is lying on the ambulance stretcher the buckles are loosened to allow the legs to extend. The board provides a firm base for any type of stretcher.—I am, etc.,

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1 Farrington, J. D., *Bulletin of the American College of Surgeons*, 1967, **52**, 121.
2 Easton, K. C., *British Medical Journal*, 1968, **3**, 123.

Facial Pain

SIR,—We should like to comment on Dr. J. B. Foster's article on facial pain (13 December, p. 667). While welcoming the mention of temporomandibular neuralgia as a cause of facial pain, we would point out that, although the majority of patients are women (the ratio of male to female patients being 1:3), they come in the age group 15-40 years.

A study of the patients attending the temporomandibular joint clinic at this hospital indicates that the percentage of patients (male and female) under 40 years of age, is as high as 64%, a figure similar to that of other reports,[1 2] and which can scarcely be considered to include middle age. The number of completely edentulous patients suffering from temporomandibular joint dysfunction is small —13%—and that reported by Franks[3] even lower at 7%. The fault with the dentures is either an increased vertical dimension or an incorrect occlusion causing a displacement on closure, and similar findings were reported by Thomson[1] and Franks[3].

Overclosure as a cause of temporomandibular joint pain in the edentulous patient is unusual, although it sometimes occurs in the partly edentulous patient when the posterior natural teeth are lost and not replaced by dentures.—We are, etc.,

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REFERENCES

1 Thomson, H., *British Dental Journal*, 1960, **107**, 243.
2 Franks, A. S., *Dental Practitioner and Dental Record*, 1964, **15**, 94.
3 Franks, A. S., *British Journal of Oral Surgery*, 1967, **5**, 157.

SIR,—In his article (13 December, p. 667) Dr. John B. Foster does not mention a new operation I heard of in the U.S.A. for trigeminal neuralgia. I know of a patient there who was completely cured of this condition by this operation after all other treatments failed and she was near to suicide. The performance of the operation does not interfere with the Gasserian ganglion or the trigeminal nerve, but the osseous foramina through which the affected nerve branch passes are surgically widened. Apparently a *tic douloureux* is caused by the acute swelling of a trigeminal nerve branch, which then gets pinched in the bony foramen too narrow for it during an attack.—I am, etc.,

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London W.5.

Ovulation after the Pill

SIR,—In the perennial discussions on the ill effects of oral contraceptives one aspect which I have not yet seen recorded is their contribution to neonatal deaths. Trying to establish a reliable estimated date of delivery is a daily problem for the practising obstetrician, and for three classes of patients, who make up about 75% of our clinic clientele, it is virtually impossible. These are: Polynesians, unmarried girls, and pill users.

In the latter group it has until recently been assumed that the last menstrual period has been a satisfactory basis from which to calculate maturity, but it is now known that ovulation does not invariably recur 17 days after cessation of the hormones. The patient may have amenorrhoea for some weeks or months, and then conceive at the first, but delayed, ovulation.

If accurate maturity is essential to the obstetric management, as in cases of toxaemia, diabetes, or Rh immunization, labour may be induced at, say, 38 weeks and a baby of 34 weeks may be inadvertently delivered to face the otherwise avoidable hazards of prematurity. Radiological and laboratory assessments of maturity are not complete safeguards for the fetus. The difficulty would be partially resolved if patients were to have at least two normal periods after discontinuing the pills.—I am, etc.,

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Oral Contraceptives and Depression

SIR,—Your leading article on oral contraception and depression (15 November, p. 380), reviews the clinical evidence for the emergence of this emotional reaction, which appears to be related to the progestogen content of the pills used. The possible biochemical mechanism discussed seemed to involve a disturbance of tryptophan metabolism, with the net effect of a functional deficiency of pyridoxine (a coenzyme in the decarboxylation to 5-hydroxytryptamine).

In the same issue, an additional clinical syndrome is reported in patients taking oral contraceptives—namely, involuntary movements, resembling chorea (p. 404). Of especial interest is the fact that in four of the five cases described the patients had suffered from rheumatic chorea some years previously. The authors discuss the possibility that a vascular mechanism, activated by the contraceptive agents, underlay the relapses of chorea, in view of various reports of changes in blood clotting properties induced by these drugs.

However, an alternative explanation which could perhaps link these two clinical manifestations, depression and involuntary movements, follows from observations by Dr. A. Barbeau on a family suffering from Huntington's chorea.[1] In younger members of this family the initial symptoms were rigidity and akinesia. Treatment with L-dopa in doses of only 2 g. daily abolished these features, but led to the emergence of classical choreic symptoms previously absent. In older members of the family, who had formerly shown only rigidity but now presented with some rigidity together with chorea, the rigidity was abolished and the chorea aggravated on 1 g. daily of L-dopa. Pertinent to the present communication is the observation that in this patient and in others, a similar aggravation of the chorea could be provoked by the administration of a daily dose of 1 g. L-tryptophan.

It seems reasonable therefore to postulate that a disturbance of tryptophan metabolism might be a common factor leading to both depressive and choreiform syndromes in patients taking oral contraceptives. An investigation of tryptophan metabolism in the chorea group, and perhaps the response of these women to pyridoxine therapy would seem to be justified. Indeed a similar line of inquiry in Sydenham's chorea may well be worth while; the basic mechanisms of this bizarre disorder are not understood and could possibly be biochemically mediated.—I am, etc.,

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REFERENCE

1 Barbeau, A., *Lancet*, 1969, **2**, 1066.