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CORRESPONDENCE

Correspondents are asked to be brief

Seat Belts and Head Rests

SIR,—Surely the available evidence shows that seat belts and head rests have two distinct protective functions, and either one does not distract from the value of the other (15 April, p. 163)?

In car collisions occupants are thrown towards the area of the initial major impact of their vehicle—that is, backwards in rear end collisions and forwards in frontal collisions. People examined following rear end collisions generally remember the violent contact of their backs against their seats' back rests, but no-one so far has been able to tell me what happened to his head or neck. All but two were in seats without head restraints and all had various degrees of soft tissue neck injuries. Two, in a car with built-in head restraints, were wearing seat-incorporated three-point belts; both experienced heavy impacts as their backs hit the seat's back rest, but both were unaware of head impacts against their well-padded head restraints. Yet the metal supports of both restraints were bent at angles that under subsequent tests corresponded to a head impact force of over 150 lb (68 kg). Neither suffered neck injuries.

This evidence strongly suggests that the term "whiplash" is a misnomer, and that neck injuries following rear end collisions are caused by the initial and often severe degrees of neck hyperextension.

After extensive clinical experience I have yet to encounter a fracture or fracture dislocation of the neck or an injury to the cervical cord following uncomplicated rear end collisions, though I have little doubt they can occur unless prevented by head restraints. In addition a study of over 500 necropsy reports has not revealed such severe neck injuries following uncomplicated rear end collisions. Yet the same necropsy evidence has shown (in addition to other injuries) a 12% instance of fractures and fracture dislocations of the neck with and without cord involvement following frontal collisions in non-belt wearers. These we have attributed to occupants being thrown forwards and their heads violently striking various car structures in front of them.

This evidence does not substantiate Dr. I. W. Caldwell's thesis that "in many situations . . . the wearing of seat belts is positively dangerous unless supported by . . . head rests." However, one must agree that these and other proved features in protective car design are long overdue for legislative action. The value of enforced legislation for protective car design has been proved in the United States, where the benefits have been shown to far exceed the costs. Indeed, if the estimated high costs of their proposed "clean-air" exhaust and air-bag restraint systems are discounted, the cost of damage limiting car design is indeed modest.—I am, etc.,

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Craniopharyngiomas

SIR,—We read with great interest your leading article on craniopharyngiomas (25 March, p. 764), but would disagree with the writer's conclusion regarding treatment that "near total removal should be the aim . . . despite the subsequent endocrinological and electrolyte problems." In the series of 50 children which he quotes,[1] there were, in fact, 43 patients who were described as suffering from diabetes insipidus as a post-operative complicaton, 10 with persistent visual loss, nine with persistent hypernatraemia, six with a temporary "lobectomy" effect, five with convulsions, four with meningitis, and one with C.S.F. rhinorrhoea; five died in the postoperative period. The series reported by Bartlett[2] is also quoted by your writer as confirming "that the best results are obtained after radical surgery." In this study there were only 20 of 73 patients (27%) surviving 10 years with the possibility of a maximum 10-year survival rate of 43%. In view of these results the alternative treament to radical surgery—conservative operation and postoperative radical radiotherapy—would seem at least worthy of discussion.

All the article goes on to say is that "the efficacy of radiotherapy remains in doubt," quoting as a reference for this statement the publication of Kramer *et al.*[3] Kramer and his colleagues in fact conclude: "these tumours are eminently suitable for irradiation therapy in the treatment of craniopharyngioma"—which is hardly supportive evidence for your article's view point. Further, a more recent and important publication[4] goes unmentioned. In 26 previously untreated patients there was only one recurrence after radiotherapy; none of the long-term survivors have shown any added disability attributable to radiotherapy.

It is difficult to assess the value of treatment in the absence of precise survival rates. Matson, for example, refers to 44 of 57 children as being alive, but further details are not given. We are currently assessing the results of radiotherapy in a series of 100 patients of all ages with primary or recurrent craniopharyngioma treated at the Royal Marsden Hospital. Both the length of survival and quality of life appear to be best in those cases treated by a combination of conservative surgery (cyst evacuation and biopsy only) followed by