LETTER TO THE EDITOR

THE GENERATION OF WHIPLASH

Sir,

Bonuccelli et al. (1) have conducted an important study, as the identification of reliable prognostic factors in whiplash patients continues to be a problem. Bonuccelli et al. base their conclusion on the finding of a higher prevalence of MRI abnormalities in subjects with higher clinical pain scores. They also point out that whiplash patients appear to have a higher prevalence of such abnormalities than a healthy population reported in another study (2).

While the conclusion that MRI abnormalities such as spondylosis “could represent a risk factor for a longer pain duration” may be correct, it is not established by the Bonuccelli et al. study. In order to make the study results more meaningful, it would have been helpful if Bonuccelli et al. had had a control population of their own, instead of referring to data from another study (2). First, genetic factors are the best predictor of the age at which disc degeneration and spondylosis appear on MRI (3), and thus one should not compare a study population from Italy (Bonuccelli et al.) to data from an American sample, that of Boden et al. (2). Second, the radiologists’ reading of abnormalities may have differed in the two studies, and the only way to control for this kind of variation would have been for Bonuccelli et al. to have had their own control population. Third, Boden et al. used an MRI system that was 10 years older technologically than that used by Bonuccelli et al., and thus likely to be much less sensitive than current MRI technology. Fourth, the population of Bonuccelli et al. is a referral group with x-ray abnormalities, which, regarded by the referring physicians as being of possible significance, probably prompted their transfer to a neurology department. As patients referred with abnormal x-rays are more likely to have signs of disc degeneration on MRI than those who have normal x-rays, it is not surprising that there is a selection bias. Finally, physicians must also recognise that pointing out to a patient that his or her x-ray is “very abnormal” and shows signs of “degenerative arthritis” may increase the patient’s distress and attention to neck pain, thereby amplifying that pain (4). Thus, patients who know they have a very abnormal x-ray – patients who will also show more abnormalities on MRI – and are then referred to a neurologist, may have higher clinical pain scores for this very reason. The prognostic value of MRI findings needs to be tested in less selected, and more controlled settings, and with the patients blinded to their x-ray or other test results.

Finally, the very last statement of Bonuccelli et al: “This finding supports the view that [the] late whiplash syndrome may represent a genuine clinical entity” warrants comment. Although I agree with Bonuccelli et al. that most whiplash patients are genuine, it is time to progress beyond this aspect of the controversy. There is no doubt that insurance fraud exists, and sadly physicians may, in some cases (5), play a part in it, but they are likely to be a minority. The point is that the whiplash debate is hindered by the back-and-forth argument between two opposing camps - organic versus non-organic. It is argued that either there is an organic (biological) disease, or if there is “nothing wrong”, then there must be a psychiatric/psychological problem (non-organic). This polarisation creates duelling camps, and
research is advanced in each according to the preconceived paradigm.

A new approach is needed. The recent prospective and landmark study in Lithuania suggests that that acute whiplash injury exists even there, but that the recovery rate in Lithuania is different from that seen in many Western countries (6). This study also proved that Lithuanians report neck pain just as often as subjects in other Western countries, and Bonuccelli et al. are incorrect to suggest that Lithuanians behave any differently in this regard. Recent studies in Canada have confirmed that following a collision and a diagnosis of Grade 1 or 2 whiplash-associated disorder, at least 50% of collision victims will continue to report chronic pain at 6 months following the collision, despite undergoing a multitude of therapies (7,8). We also know, however, that this is the unnatural history of acute symptoms following a neck sprain. The natural history of a neck sprain from a motor vehicle collision has been demonstrated in Lithuania, Greece, and Germany. In all these countries, acute neck pain after a collision is common. Yet, the recovery rate for more than 90% of subjects is within 4-6 weeks, and at 6 months, no increased risk of chronic symptoms versus the risk in the general, uninjured population (4,9) can be detected. It is certainly possible that a small proportion of subjects could have chronic structural damage in countries like Lithuania, and that current studies with background prevalence of neck pain in the control population of up to 10% are not large enough to distinguish an additional 2-3%. Yet, this additional 2-3% of patients are not the group of patients we are concerned with. It is the 50% of patients with chronic pain at 6 months in other countries that we are concerned with and no power analysis can explain this rift. As no one has suggested that Lithuanians, Greeks, and Germans have a different anatomy (or are any less likely to show fewer MRI abnormalities), we need to look for an explanation for this difference in recovery rates.

The answer lies in the biopsychosocial model of whiplash. This model has been described in detail elsewhere (4,9) and it is based on the assumption that while there is a genuineness to symptoms, which can be attributed to many physical sources, the behaviour in response to those symptoms, becoming maladaptive and disabling, is determined by psychosocial factors. In some cases, therefore, the patient is right when he or she asserts that the symptoms are in the body, but it can be appreciated that the response to these symptoms, fear about the them, and the tendency to seek medical attention and litigation in response to them, are not.

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