

Letter to the Editors

A painful train of events: the rebirth of railway spine

Sirs,

The most succinct reflection on the report by Buskila *et al.* (1) of the relatively significant prevalence of chronic pain, psychological disorder, and disability (fibromyalgia) after major train collisions would be “been there (1), known that” (2, 3). The report signifies an ominous event: the repetition of history. A once epidemic phenomenon appears to have been recognised again. Here, one is concerned about the re-emergence of railway spine (2, 3).

The history of railway spine (now called post-train collision fibromyalgia by some) has been reviewed in detail elsewhere (2, 3). The lesson learned from this history is that railway collisions are quite horrific events, often resulting in explosions, serious injury, and many fatalities. Among the survivors, however, there may be a subset whose symptoms appear to occur when they “had not received a scratch” (4). These patients puzzled medical science in the 19th century (4), but they should not do so now.

In fact, the eventual understanding of railway spine developed into appreciating it as a post-traumatic stress disorder (2). Currently, the evidence points to some cases of post-traumatic fibromyalgia as having more to do with post-traumatic stress disorder than any other disorder (5).

From the original cases series reported as railway spine (4), the symptoms can be listed as in Table I.

The history of this medico-legal and social development of railway spine has been reviewed by Keller, wherein the relevance and parallels to fibromyalgia are apparent (6). Inevitably, in the absence of underlying scientific support, railway spine lost steam (as did trains) over the years. Scientists began to denounce Erichsen’s theories and the lack of experimentation to support them. In time, other prominent physicians, such as the Parisian neurologist Jean-Martin Charcot, would bring forward the psychology of traumatic neurosis, applied to types of injuries not necessarily involving the spine and which led to more effective treatments than any based on injury models. Indeed, by the turn of the century, medical articles had started to review the history of railway spine under such titles as “Neuroses Following Railroad Injuries” (7). Did we learn (2, 3), or didn’t we? (1).

He who lives to see two or three generations is like a man who sits in a conjurer’s booth at a fair, and witnesses the performance twice or thrice in succession. The tricks were meant to be seen only once; and when they are no longer a novelty and cease to deceive, their effect is gone (8).

The novelties of one generation are only the resuscitated fashions of the generation before last (9).

R. FERRARI, MD, FRCPC, FACP, Professor
Department of Medicine and Department of
Rheumatic Diseases, University of Alberta,
Edmonton, Alberta, Canada,

Table I. Railway spine symptomatology, as described by Erichsen (4), paraphrased with current medical terminology.

Memory impairment
Poor concentration
Sleep disturbance
Anxiety
Irritability
Back stiffness and pain
Pain on movement of spine
Headache
Hearing problems
Extremity numbness
Arm and hand pain
Loss of sexual desire

Please address correspondence to: Dr Robert Ferrari, Department of Medicine, 13-103 Clinical Sciences Building, University of Alberta, Edmonton, Alberta, Canada T6G 2P4. E-mail: rferrari@shaw.ca

Competing interests: none declared.

References

1. BUSKILA D, ABLIN JN, BENZION I *et al.*: A painful train of events: increased prevalence of fibromyalgia in survivors of a major train crash. *Clin Exp Rheumatol* 2009; 27 (Suppl. 56): S79-85.
2. FERRARI R: Whiplash Encyclopedia. The Facts and Myths of Whiplash. 2nd ed. Virginia: Jones & Bartlett, 2005, p. 17-31.
3. FERRARI R, SHORTER E: From railway spine to whiplash- the recycling of nervous irritation. *Med Sci Mon* 2003; 9: HY27-HY37.
4. ERICHSEN J: On Railway and Other Injuries of the Nervous System. Philadelphia: Lea, 1867.
5. COHEN H, NEUMANN L, HAIMAN Y, MATAR MA, PRESS J, BUSKILA D: Prevalence of post-traumatic stress disorder in fibromyalgia patients: Overlapping syndromes or post-traumatic fibromyalgia syndrome? *Semin Arthritis Rheum* 2002; 32: 38-50.
6. KELLER T: Railway spine revisited: traumatic neurosis or neurotrauma. *J Hist Med Allied Sci* 1995; 50: 507-24.
7. SCOTT HB: Neuroses following railroad injuries. *Kentucky Med J*, 1917; 15: 322-3.
8. SCHOPENHAUER A: On the sufferings of the world. In: SAUNDERS TB (Ed.) *Studies in Pessimism. A series of essays by Arthur Schopenhauer*. London: Swan Sonnenschein & Co; 1898, p. 14.
9. SHAW GB: On Diabolonian ethics. In: *Three Plays for Puritans*. Middlesex, England: Penguin Books Ltd, 1976, p. 24.

Reply

Sirs,

We read with interest the letter of Dr Ferrari and would like to thank him for his historical perspective on the issue of fibromyalgia following a railroad crash. It seems a pity though to adopt such a pessimistic point of view, as might inevitably be expected to spring out of viewing the topic through a Schopenhauer prism, as Dr Ferrari has chosen to do. Indeed, the association between train crashes and chronic pain has been recognised for a long time. In his original paper coining the term “fibrositis”, decades later to evolve into “fibromyalgia”, William Gowers describes the following: “... Another definite form of fibrositis is the traumatic, induced by sudden violent tension on the tendinous and ligamentous structures ... I recently saw a woman who had strained her back severely during the overturning of

a tramcar three months before. Ever since the accident there had been extreme sensitiveness of the tendinous attachments of the dorsal muscles to the spine bone.” (1). Similarly, Frida Kahlo, the great Mexican artist, suffered a tragic life of chronic pain ever since being severely traumatised at the age of 18 in the collision of a street car and a bus, and probably in fact endured longstanding, poorly-treated fibromyalgia (2). And yet, we still reject Dr Ferrari’s pessimism. Over the last couple of decades, enormous progress has been made in understanding the etiology and pathophysiology of fibromyalgia (3), as well as improving the understanding of the relationship between trauma, PTSD and pain (4, 5). Thus, we are closer than ever before to understand the way in which central sensitisation develops and tics (6). We now can begin to understand the way in which activation of the autonomic nervous system, through trauma and/or stress, can contribute to the development and stabilisation of altered pain processing (7). With all this additional evidence to draw from, we are far better posed to incorporate the train – trauma model into the broader context of fibromyalgia. We no longer need to treat it as a “Neuroses following railroad injuries”, a terminology which, in fact, contributes next to nothing to explain the alteration of pain processing occurring in individuals after such events.

Thus, rather than use metaphors of conjurer’s booth and resuscitated fashions, we would prefer the old image of “nanos gigantum humeris insidentes” (dwarfs standing on the shoulders of giants). We can draw on the 19th century clinical acumen and experience and add our 21st century enhanced acuity regarding mechanisms involved in pain processing. No need for pessimism.

J. ABLIN, MD¹
D. BUSKILA, MD²

¹Tel-Aviv Sourasky Medical Centre, Israel;
²Soroka Medical Centre, Beer-Sheva, Israel.

Address correspondence to: Jacob N. Ablin, MD, Tel-Aviv Sourasky Medical Centre, 6 Weizman St., Tel-Aviv 64239, Israel.

E-mail: ajacob@post.tau.ac.il

Competing interests: none declared.

References

1. GOWERS W: Lumbo: its lessons and analogues. *BMJ* 1904; 117-121
2. MARTINEZ-LAVIN M, AMIGO MC, COINDREAU J, CANOSO J: Fibromyalgia in Frida Kahlo’s life and art. *Arthritis Rheum* 2000; 43: 708-9.
3. ABLIN K, CLAUW DJ: From fibrositis to functional somatic syndromes to a bell-shaped curve of pain and sensory sensitivity: evolution of a clinical construct. *Rheum Dis Clin North Am* 2009; 35: 233-51.
4. AMIR M, KAPLAN Z, NEUMANN L, SHARABANI R, SHANI N, BUSKILA D: Posttraumatic stress disorder, tenderness and fibromyalgia. *J Psychosom Res* 1997; 42: 607-13.
5. AMITAL D, FOSTICK L, POLLACK ML *et al.*: Posttraumatic stress disorder, tenderness, and fibromyalgia syndrome: are they different entities? *J Psychosom Res* 2006; 61: 663-9.
6. YUNUS MB: Fibromyalgia and overlapping disorders: the unifying concept of central sensitivity syndromes. *Semin Arthritis Rheum* 2007; 36: 339-56.
7. MARTINEZ-LAVIN M: Biology and therapy of fibromyalgia. Stress, the stress response system, and fibromyalgia. *Arthritis Res Ther* 2007; 9: 216.