Understanding what it means to be "Charcot foot health literate"

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Described as a "Cinderella condition", Charcot foot is little understood within the non-specialist medical community. In this article, Benjamin Bullen (Cardiff Metropolitan University, Cardiff, UK) presents a multidimensional conceptualisation of health literacy and underlines the importance of developing knowledge on the subject of Charcot foot, especially for the treatment of "At-risk" patients with diabetic peripheral neuropathy.

Early conceptualisations of health literacy focused on "the ability to read and comprehend written medical information and instructions".[1] Since the turn of the century, research has consistently reported that these "functional" health literacy traits may be lower among individuals with diabetes mellitus.[2-4] However, a seminal paper by Don Nutbeam in 2000, "Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century," described a continuum of escalating "functional", "interactive" and "critical" health literacy traits.[5]

In addition to applied literacy skills, interactive (more commonly referred to now as "communicative") health literacy further considers health-information-seeking behaviours.[6] Such skills are necessary for individuals to make sense of information from a variety of increasingly online sources.[7-9] Communicative health literacy skills are further necessary for engagement with health care professionals and the development of effective diabetes self-management behaviours.

Information appraisal represents more advanced "critical" health literacy skills, defined by Sara Rubinelli and colleagues[10] as the "capacity to contextualise health knowledge for his or her own good health [and] to decide on a certain action after a full appraisal of what that specific action means for them 'in their own world'." For people with diabetic peripheral neuropathy who are "At-risk" of Charcot foot development, further disease-specific contextualisation is warranted.

The Charcot foot

If you have never heard of Charcot foot, you are not alone. This rare, yet potentially devastating condition has been defined as "a syndrome in patients who have neuropathy or loss of sensation", and "includes fractures and dislocations of bones and joints that occur with minimal or no known trauma."[11] Classic signs of 'Active' disease are a unilateral, erythematous, hot, and swollen foot. Moreover, sensory neuropathy may mask painful symptoms and delay presentation to specialist services and timely below-knee offloading. Incidence has been reported among 0.1% and 29% of people with diabetes, while published prevalence ranges from 0.08–13%.[12-14]

Due to its relative rarity, several authors have considered Charcot foot to be a "Cinderella condition". For Susan Freeman, "the Charcot foot is often the Cinderella of diabetic foot disease, requiring a high index of suspicion. Early referral and treatment is usually the key to prevent long term deformity and recurrent foot problems."[15]

At the 20th Annual National Conference of The Diabetic Foot Journal, William Jeffcoate expanded on this metaphor in his presentation, entitled "The little we know about the Charcot foot, the Cinderella of Cinderellas: It is bizarre that the profession pays so little attention to such a serious condition".[16]

We are aware of only one study investigating Charcot foot knowledge among health care professionals. Brian Schmidt and colleagues[17] explored Charcot foot knowledge among 400 non-specialist US physicians, reporting poor or no practical knowledge among 68% of these individuals. Research among diabetes populations, including "At-risk" groups with diabetic peripheral neuropathy, are currently lacking.

Charcot foot health literacy

Charcot foot health literacy may be defined as knowledge and understanding of the Charcot foot and having the skills and confidence to recognise "danger signs" and seek professional help. "Danger signs" include the presence of an erythematous, hot and swollen foot in an individual with diabetic peripheral neuropathy. Within the UK, "professional help" may be multidisciplinary, including podiatrists and medical specialists. Orthopaedic surgeons may also correct resultant foot deformity following resolution of the "Active" phase.

We wish to reiterate the need for a high index of suspicion of Charcot foot in the event of "danger signs". To this end, all healthcare providers engaged with "At-risk" populations should be Charcot foot health literate.

Addressing practitioner literacy is just one piece of the puzzle, however. Recent UK and European research, involving 600 general practitioners and 1,188 cases of diabetes foot ulceration, reported that patient concerns prompted diagnosis in an average of 60% of cases.[18] Further observational research is therefore warranted concerning the specific Charcot foot health literacy characteristics possessed by patients. In addition, we urge the reader to discuss this condition with all "At-risk" patients, a sentiment shared by podiatry respondents to a recent Scottish survey.[19-20]

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