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History of traction

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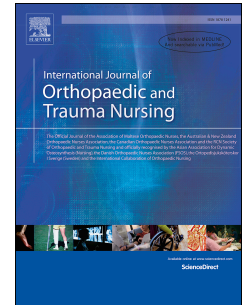
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HISTORICAL PERSPECTIVES

History of Traction

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Introduction

Traction is defined as the 'application of a pulling force to a part or parts of the body for the treatment of bone and muscle disorders or injuries' (Newton-Triggs et al, 2014. p.91) It is mainly applied to the arms, legs, pelvis or spine and is used to rest limbs and reduce fractures and dislocations of bones and joints. The two fundamental methods of applying traction are known as skin traction and skeletal traction. Although it remains an important part of modern orthopaedic care, traction has been a form of treatment for musculoskeletal injuries, diseases and deformities for many centuries. The aim of this paper is to provide an overview of the history and development of traction as a form of musculoskeletal treatment so that practitioners can place contemporary practice in context with its journey to modern times.

Early history

History records the methods used in antiquity, by physicians living and practicing in ancient Greece, Egypt, Babylonia, Persia and Rome, to treat musculoskeletal injuries, although it is difficult to determine from historical literature whether such practice was a widely adopted and effective method of treatment (Brorson, 2009). Early illustrations and descriptions of traction methods from ancient Egypt are recorded in the preserved 'Edwin Smith papyrus' which dates from around 1,300 BC (Blomstedt, 2014). The papyrus chronicle how the ancient Egyptians applied manual traction to align the bone ends in fractured limbs, which were then held in place by splints made from wood, bamboo or reeds and lined with linen. During excavation of the tombs of ancient Egypt, mummified bodies with splints in-situ have been unearthed, providing evidence of traction practice during this period in history.

In ancient medical practice, longitudinal traction was used to re-align overriding bone fragments; the skin traction was then discontinued once the splints had been applied to the limb. There are illustrations of this practice in existence today that detail how these methods were used.

Hippocrates, a Greek Physician (350 B.C.) known as the 'father of medicine', described in detail the practice of traction and counter-traction and how the use of weights, pulleys and levers harnessed the forces of extension and counterextension for the treatment of fractures of the long bones and spinal disorders (Olsen, 2016., Browner, 2014., Griffiths & Brockbank, 1949). Hippocrates devised the "succussion" or shaking method for patients with spinal deformities; this involved placing the patient in a head-down position and tying his ankles to a ladder (the Hippocratic ladder). Soft bands were then placed around the knees, hips, flanks and chest, whilst the hands were tied firmly against

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