

Whiplash Injury and Hippocrates: Practical Points for Contemporary Practitioners

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ABSTRACT. The purpose of this article is to consider how the basic principles used by Hippocrates in assessing and managing disease in general and musculoskeletal problems in particular relate to the better management of “whiplash injury” today. Hippocrates’ principles of observing, listening, touching, examining, and recording, and finally of considering the patient in his/her past and present environment are most relevant for contemporary practitioners, particularly those who are asked to assess and/or treat cervical sprain or whiplash injury. (*J Rheumatol* 2001;28:352–4)

Key Indexing Terms:
WHIPLASH INJURY
OBSERVING

PAIN
LISTENING

HISTORY OF MEDICINE
RECORDING

If the science of medicine is not to be lowered to the rank of a mere mechanical profession it must preoccupy itself with its history....

— Emile Littré

Two editorials in the *Journal of Rheumatology*^{1,2} and the editors of a recent textbook³ revealed that so-called “whiplash injury” remains an increasing problem. We define whiplash injury as a simple musculoskeletal sprain of the neck and sometimes upper back, excluding fractures and nerve root or complex neck injuries. Perhaps readers might wonder how Hippocrates and his teaching of some two and a half millennia ago could possibly relate to this troubling problem today. We shall see.

Historical background. Born in Greece on the island of Cos about 460 years BC, Hippocrates learned from his physician father and grandfather before him. He also learned from Pythagoras, who taught that good health follows a harmony of mind, body, and soul, and Heraclitus, who believed we could reliably perceive ever-changing nature^{4,5}.

Hippocrates, not satisfied with just Greek medical beliefs, travelled the Mediterranean as an itinerant healer, visiting the medical centers of his day.

The causes of disease. In those days disease was considered to be due to the position of stars, to the Gods, or to magic. Hippocrates challenged mystic causes of illness, and keeping careful records of individual cases, he considered multiple agents including the patient’s environment. For example, it was believed that the “sacred disease” epilepsy had a divine cause, but Hippocrates declared⁶, “It appears to me to be nowise more divine nor more sacred than other

disease, but has a natural cause from which it originates like other affections.” He attributed the disorder to the brain and its blood vessels, a remarkable theory for that time.

When he described the disease we now know as mumps⁷, he noted its season, the climate and wind direction, the population most vulnerable, children and youths at the gymnasium, and its self-limiting nature, thus differentiating it from more serious swellings of the neck or face. He observed “the swellings about the ears,” usually on both sides, and noted the sometimes later complication of inflamed testicles.

The musculoskeletal system and whiplash injury. Hippocrates was particularly interested in the musculoskeletal system. His methods for reducing a dislocated shoulder or hip can hardly be improved upon today. For the aftercare of the reduced shoulder he advised that, “a ball of soft clean wool is to be introduced into the armpit, to fill up the hollow of it, that it may be a support to the bandaging, and maintain the joint *in situ*. The arm, in general, should be inclined upwards as much as possible.... You must fasten the arms to the sides with a band.... The shoulder should be rubbed gently and softly... and the joint be moved about, but not roughly.”⁸ Good principles to follow in the early treatment of whiplash injury.

Today, it is generally agreed, and indeed the Quebec Task Force on Whiplash Associated Disorders confirmed the need for early restoration of function in common whiplash⁹. Hippocrates had warned about the dangers of prolonged rest — “Generally speaking, all parts of the body which have a function, if used in moderation and exercised in labours to which each is accustomed, become healthy and well developed and age slowly; but if unused and left idle they become liable to disease, defective in growth, and age quickly. *This is especially the case with joints and ligaments, if one does not use them.*”¹⁰ [My italics].

We do not know how much Hippocratic writing came

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Submitted June 5, 2000 revision accepted July 3, 2000.

from the master himself or from his followers, for authors then frequently wrote under a more famous name to give their words more authority¹¹. Furthermore, Hippocratic writing contained chaff among the wheat (a happening not uncommon in medical writing today).

An earlier observer. Parts of Hippocratic writing must have been lost in the sands of time. For example, we find little about cervical injury in *Articulations*¹². Remembering that Hippocrates travelled throughout the Mediterranean it is likely he came across the writings of the obscure Egyptian surgeon whose papyrus was researched by William Breasted in 1930. In the Edwin Smith Surgical Papyrus, four separate cervical injuries were described¹³: 1. Case Thirty. Sprain in a cervical vertebra. 2. Case Thirty-one. Dislocation of a cervical vertebra. 3. Case Thirty-two. Displacement of a cervical vertebra. 4. Case Thirty-three. A crushed cervical vertebra.

This “classification” preceded the Quebec Task Force classification on Whiplash Associated Disorders by four millennia. For “sprain in a cervical vertebra,” the milder form of cervical injury, which sounds similar to our definition at the start of this article, the Egyptian surgeon advised¹³, “Thou shouldst bind it with fresh meat the first day. Now afterward thou shouldst treat [with] YMRW (and) honey every day until he recovers.”

The greasy support with meat was used for one day only. A sharp contrast to today, when some practitioners allow whiplash patients to wear collars for weeks. Furthermore, the meat would have attracted flies, discouraging its overuse. No one knows what YMRW was.

Further Hippocratic treatment. In some cases of spinal dysfunction Hippocrates used “succussion,” shaking patients upside down upon a ladder¹⁴; but he warned against the overuse of this or of any other modality, declaring, “I have been ashamed to treat all such cases in this way, because such modes of procedure are generally practised by charlatans.”¹⁴ Should we not remember his advice in managing whiplash injury today?

Hippocrates also described manipulating the spine¹⁵, a form of treatment avoided by most contemporary physicians¹⁶ and which may prove injurious in less than careful hands¹⁷. He advised, “The physician, or some person *who is strong and not uninstructed*, to apply the palm of one hand to the hump, and then, lay the other hand upon the first and press, *attending whether this force should be applied directly downward, or toward the head or toward the hips.*”¹⁵ Here he advised manipulating the spinal joints *according to the patient’s functional anatomy*, the planes of the facet joints [my italics].

Several noted physicians in history have advised manipulative techniques, including James Paget, who, in a delightful lecture¹⁸ at St. Bartholomew’s hospital in London, advised physicians “to learn what is good in the practice of the bone-setters and avoid what is bad.” A canny Scot, he

added, “Few of you will practice without having a bone-setter for an enemy. And if he can cure a case which you have failed to cure his fortune will be made and yours marred.”¹⁸

Interestingly, two 1998 studies on spinal manipulation in leading medical journals concluded that the effectiveness of manipulation had not been proven¹⁹, or was just marginally better than a simple educational booklet²⁰. Neither study noted Paget’s or Hippocrates’ earlier contribution. Concentrating upon the present, we may fail to see how relevant history is to today’s problems. Meanwhile, I suspect, patients, including those with whiplash injury, will continue to consult manipulators of various stripes, will sometimes be overtreated (contrary to Hippocrates’ teaching), and will be occasionally damaged in unwise hands¹⁷.

Careful case recording. Hippocrates kept careful short case records of individual patients, reminiscent of the anonymous Egyptian surgeon who recorded diagnosing and management of illustrative cases some two millennia earlier¹³. An example of Hippocrates’ careful recording can be seen in Case VII, the woman who lived in the house of Aristion and whose illness began with a sore throat. In 78 words Hippocrates described her developing high fever, parched tongue, and later rigours, reddish hard swelling in her neck, increased breathing, inability to swallow, “drink returned through the nostrils,” (due to paralysis of the soft palate), and finally death on the fifth day²¹. He described the illness so clearly that contemporary physicians should diagnose the case from his account. Can you?

The disease, unfamiliar to us today, was known to our great grandparents as acute fulminating diphtheria.

Here we see his diagnostic method, observing, listening, touching, examining, and recording. Recording in 78 words, a sharp contrast to some of today’s overlengthy medical reports.

Psychosomatic illness. Hippocrates wrote of madness but little of the influence of mind in illness, so commonly part of the whiplash puzzle today²². Nor did he describe psychosomatic illness, common in Western society during the past three centuries²³. Perhaps such cases were then less prevalent or perhaps Hippocrates was too busy with desperate cases. Sixty percent of the cases described in *Epidemics I and III* died.

A final message. In perhaps his best known dictum, Hippocrates advised, “Declare the past, diagnose the present, foretell the future. As to diseases, make a habit of two things — to help, or at least do no harm. The art has three factors, the disease, the patient, the physician. The physician is the servant of the art. The patient must cooperate with the physician in combating the disease.”²⁴

In just 56 words he provides five principles for whiplash management today. 1. Declare the past. For complete diagnosis we must know the patient’s past health and back-

ground. Consultants today could benefit by obtaining copies of personal physicians' records of patients' office visits, including pre-accident visits, which may reveal a deeper level of diagnosis²². 2. Diagnose the present. It is after "declaring the past" that we can better "diagnose the present," usually by observing, listening, touching, examining, and recording. 3. Foretell the future. Patients need to know a rough prognosis from their personal physician reasonably early in their illness. 4. To help or at least do no harm. Eight vital words. Particularly, to avoid useless or excess treatment.

Recently, Obeleniene, *et al* in Lithuania²⁵ and Partheni, *et al* in Greece²⁶ found less treatment to be more effective in whiplash injury, and suggested that overtreatment, insurance companies, and lawyers retarded recovery. In Saskatchewan, Canada, Cassidy, *et al*²⁷ in their sample essentially confirmed the European findings, and noted that patients who attended a chiropractor or a physiotherapist in addition to their physician actually recovered more slowly. Natural exercising is preferable, exercising incidentally being a part of Greek culture in the 5th century BC. Also, earlier return to work and regular activities help patients^{28,29}. 5. The patient must cooperate with the physician and the physician must encourage such cooperation. Do not these simple observations embarrass us when we see how many of today's whiplash patients are being managed? "Simple observational studies can produce data of great quality."³⁰

I suggest that if contemporary practitioners applied these ancient principles more carefully we would help our patients more and would help lessen the current epidemic of whiplash injury²².

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