FINKELSTEIN'S TEST: A DESCRIPTIVE ERROR THAT CAN PRODUCE A FALSE POSITIVE

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Over the last three decades an error in performing Finkelstein's test has crept into the English literature in both text books and journals. This error can produce a false-positive, and if relied upon, a wrong diagnosis can be made, leading to inappropriate surgery.

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Since de Quervain first described the clinical entity of stenosing tenosynovitis of the tendons in the first compartment of the wrist in 1895, there have been many papers concerning the diagnosis, theories of aetiology, pathology and treatment of the condition.

One of the most significant papers in the English literature was by Finkelstein (1930). In this paper he described what has now become known as *Finkelstein's test*: "on grasping the patient's thumb and quickly abducting the hand ulnarward, the pain over the styloid tip is excruciating. *This is probably the most pathognomonic objective sign.*" (Fig. 1). Other features in the diagnosis are, of course, the history and the signs of local swelling, tendon sheath thickening and tenderness over the radial styloid.

Since this paper many writers have correctly described the Finkelstein test (Loomis, 1951; Watson, 1983; Nalebuff, 1984; Cameron, 1985; Milford, 1987). However, a second method of performing Finkelstein's test has appeared with increasing frequency in the literature: passive ulnar deviation of the wrist when the thumb is gripped in the palm causes severe discomfort (Lipscomb, 1959; Kelly and Jacobson, 1964; Phalen, 1975; Field, 1979; Conolly, 1980; Urbaniak and Roth, 1982; Louis, 1984; Hooper, 1989; Witt el al., 1991). Patterson and Jones (1945) when discussing physical signs described this mechanism of aggravating the pain.

The first time that Finkelstein's test is described incorrectly appears to be in the paper by Leâo (1958). In his introduction, he states "In reality, Finkelstein transcribed the test described by Eichhoff in 1927". A review of both Finkelstein's article and the paper by Eichhoff confirms that Finkelstein has accurately translated the latter article in which Eichhoff describes an experiment to confirm his theory that repetitive tendon stretching by ulnar abduction of the hand could be the cause of the condition. "If one places the thumb within the hand and holds it tightly with the other fingers and then bends the hand severely in ulnar abduction, an intense pain is experienced on the styloid process of the radius, exactly at the place where the tendon sheath takes its course." (Fig. 2). Loomis (1951) also drew attention to this finding in the normal wrist.

This production of pain by stretching tendons can be similarly demonstrated by fixing the fingers into the palm of the hand and forcibly palmar flexing the wrist, the pain being felt on the dorsal aspect of the wrist. It appears that authors subsequent to Leâo's paper have either used his description or have also misread Finkelstein's paper, further perpetuating the error.

Fig. 1 Finkelstein's test: the patient's thumb is grasped and the hand abducted ulnarward.

Fig. 2 Eichhoff's experiment: the thumb is grasped in the clenched fingers and the hand abducted ulnarward.

All surgeons should be aware of the correct test so that the risk of misdiagnosing de Quervain's disease is eliminated. Further, when quoting from an article it is important to read the whole of the original, rather than merely "quoting a quote". Inadvertant errors are otherwise perpetuated.

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