

Hand injury: association of handedness with cause and site of injury

Abstract:

BACKGROUND: Most people have a dominant hand: right or left. The dominant hand for most purposes is that which is used for writing. The performance, reflex activity and exposure of these hands differ. Due to this asymmetry, it is possible that handedness may influence the likely causes, the lateralization and pattern of injury. **OBJECTIVE:** This study was designed to assess the association of hand dominance to the causes, lateralization and pattern of hand injuries. **SETTING:** Kenyatta National Hospital, a national referral and teaching hospital in Nairobi, Kenya. **METHODOLOGY:** A prospective analysis of consecutive patients who presented with unilateral hand injuries between May and August 2006 at (KNH) was done. Data on hand dominance, hand injured, causes and pattern of injury were collected using a questionnaire. Associations were investigated using student's t-test and Chi square tests, with level of significance taken as < 0.05 . Yates correction and Fischer's exact tests were used where the cell value was less than 5. **RESULTS:** A total of 99 patients with hand injuries were recruited. Ninety four were right handed, three left handed, with two ambidextrous. The dominant hand was injured in 47 (48.5%), while the non-dominant hand was injured in 51.5% of the cases ($p = 0.27$). The most common causes of injury were occupational (31.3%) and assaults (30.3%). Falls on the hand caused injury more on the dominant hand ($p=0.03$) than the non-dominant one. Hand dominance had no influence on the other causes, nor did it have influence on the lateralization and pattern of injury. **CONCLUSION:** With the exception of falls, hand dominance has no influence on causes, lateralization and pattern of hand injury.