



Ruptured tendon sidelines Candy Crush gamer after weeks of constant play

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A 29 year old man lost use of his left thumb after playing the smartphone game Candy Crush all day for more than six weeks, says a case report published online on 13 April in *JAMA Internal Medicine*.¹

“He played with his left hand while using his right hand for other tasks, stating that ‘playing was a kind of secondary thing, but it was constantly on,’” wrote the report’s lead author, Luke Gilman, a doctor at the US Naval Medical Center, San Diego, California.

The patient reported that he had no history of injuries, operations, or predisposing medical conditions for tendon rupture and that when playing the game he had felt no pain.

He presented with chronic left thumb pain and loss of active motion. On physical examination the left extensor pollicis longus tendon was not palpable, and no tendon motion was noted with wrist tenodesis, an orthopedic maneuver in which the hand is induced to passively grasp and release by extending and flexing the wrist. Magnetic resonance imaging showed rupture of the tendon.

The patient underwent a tendon transfer: extensor indicis proprius (one of two tendons that extend the index finger) to extensor pollicis longus. “During surgery, rupture of the extensor pollicis longus tendon was seen between the metacarpophalangeal and wrist joints,” the authors wrote.

The authors noted that the pleasure and excitement associated with video games has been associated with physiologic arousal and stimulation of the hypothalamic-pituitary-adrenal axis that results in increased heart rate, blood pressure, and sympathetic tone and that games have been shown to be able to suppress the perception of pain in pediatric patients undergoing painful treatments for burns.

“Visual distraction and neuroendocrine hypothalamic-pituitary-adrenal arousal provide a plausible explanation for why the patient did not feel pain from his injury. Without the expected physiologic negative pain feedback, excessive gaming may have led to tendon attenuation and subsequent attritional rupture of the tendon,” the authors wrote. This possible analgesic effect might indicate that video games could be used in clinical pain management, they concluded, adding, “Research might also consider whether pain reduction is a reason some individuals play video games excessively, manifest addiction, or sustain injuries associated with video gaming.”

1 Gilman L, Cage DN, Horn A, Bishop F, Klam WP, Doan AP. Tendon rupture associated with excessive smartphone gaming. *JAMA Intern Med* 13 Apr 2015, doi:10.1001/jamainternmed.2015.0753.

Cite this as: *BMJ* 2015;350:h2054

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