One of the earliest hip injuries, recorded to have occurred over 3,500 years ago, was the biblical story of Jacob wrestling with the angel (Genesis 32:25-33). Jacob crossed the ford of Jabbok with his family as he was returning to Canaan to reconcile with his brother Esau. Upon the realization that he left something behind, Jacob returned to retrieve it and encountered a man, who according to Jewish tradition was a supernatural being: the guardian angel of his estranged brother Esau [1]. The story was recorded as follows:

And Jacob was left alone; and there wrestled a man with him until the breaking of the day. And when he saw he prevailed not against him, he touched the hollow of his thigh; and the hollow of Jacob's thigh was strained, as he wrestled with him...And the sun rose upon him as he passed over Peniel, and he limped upon his thigh. Therefore the children of Israel eat not the sinew of the thigh-vein, which is upon the hollow of the thigh, unto this day; because he touched the hollow of Jacob's thigh, even in the sinew of the thigh-vein [2].

The battle between the angel and Jacob is described by Rabbi Shlomo ben Yitzchak as two individuals struggling together, each attempting to overthrow the other with interlocked arms (Rashi Breishit 32:25). The anatomic site of the trauma is defined through the words of the text. The verse indicates that the man touched the kaph of his thigh, and the kaph of Jacob's thigh loosened. The kaph describes a curved surface such as the palm of a hand, the sole of a foot, or a socket and a shell; here the kaph indicates the hip socket and acetabulum, the curved surface closest to the thigh [3]. Talmudic scholars teach that the kaph is specifically the convex shape formed by hip musculature and its attached gluteal muscles (Hullin 89b).

Hip injuries can be classified into two general categories: those in which there is a dislocation and those with muscular and neurological damage. If this had been an injury with a hip-joint dislocation, Jacob would not have been able to move without treatment, a contradiction based on the continuation of the passage where Jacob limps away. Furthermore, Jacob remained alone, which indicates that there was no medicine man or healer from the Bedouin people around to reduce the dislocation [3]. Thus the injury was more likely a loosening of the socket instead of a complete dislocation. This is a pathological condition, similar to another biblical reference, when Balshazzar was frightened by Mene Tekel. It is written that “the joints of his hips were loosened, and his knees smote one against another,” thus the hip joint loosened without displacement (Daniel 5:6). However, there remains an opinion that a dislocation actually occurred even though Jacob was capable of limping away, because there was a form of solar healing orchestrated by G-d after the sun rose (Breishit Rabbah 32:25-33).

In contrast to a complete dislocation, a non-dislocated hip injury can occur through resistance to motion or physical contact. Rabbi Samson Raphael Hirsch explains that when Jacob was gripped by the angel, Jacob showed resistance and therefore the muscle tore away from the ligaments and he was unable to control his leg movement (Breishit 32:25). This was sufficient to cause the limp described at the end of the episode, but it did not render Jacob unable to move. Maimonides suggests that Jacob envisioned this battle through a prophecy [4]. This does not preclude Jacob from suffering the injury mentioned in the text. Jacob could have endured a resistive injury even through a prophetic battle if, perhaps, his body subconsciously reacted to the terrifying battle he envisioned [5]. Alternatively, the angel could have induced multiple blows directly to Jacob's buttock (Rashi Hullin 91a). Similarly, the injury could have been caused if the angel struck Jacob close to his genitalia. This interpretation stems from the angel seeking a moral weakness within Jacob. Jacob's only sin was marrying two sisters, a marriage that would be prohibited only in the future. The angel injured Jacob near his reproductive organs to punish his sexual offense (Midrash Rabbeinu Bahya Genesis 32:25).

Additionally, commentators describe an injury to the sciatic nerve. The word nasheh does not occur elsewhere in Hebrew and is defined as “the nerve of the hip” in Arabic [3]. The Talmud derived the interpretation of the sciatic nerve from nasheh because it means “slipped away,” and the nerve was moved during the injury (Hullin 91a). Commentaries quote the opinion of the Midrash that there was an anatomical distortion caused by flattening of the hip (Breishit Rabbah 32:25-33). Pressure applied to the sciatic nerve caused by hip abnormalities, as well as its effect on surrounding muscle groups, including the piriformis muscle, can cause damage and sufficient pain for an individual to limp [6, 7].

Moreover, there is an opinion that Jacob’s hip was “split” open “like a fish,” suggesting an open wound. As was previously mentioned, there would have been some reduction of dislocation or miraculous healing if Jacob suffered a complete dislocation and was able to leave on his own. Therefore, a more probable injury would have been a hip fracture in which the individual is ambulatory with an altered gait [8]. According to this assumption, the “split” pathology was more likely describing a laceration than a compound fracture, which would require extensive medical attention.

Dr. Leonard Hoenig studied the differential diagnosis of Jacob’s hip and incorporated dislocation, fracture, and damaged soft tissue [9]. It is crucial to note that without radiologic images, the exact diagnosis of Jacob and the extent of his injury will remain unknown. However, the multitude of ideas brought down through biblical commentaries, in comparison to present day journal articles, indicates that damaged hip pathologies were discovered over 3,500 years ago. The breakdown of what was available for medical treatment at the time and the success at which Jacob was capable of limping away dictate a less severe injury, unless there was Divine intervention and miraculous healing. This discussion allows the reader to have a better appreciation for the medical facts behind the story of Jacob and to see the evolving nature of a differential diagnosis, dating back to understanding Jacob’s injury.
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References: