

Ice Age Acupuncture?

STUDY OF MUMMIFIED BODY RAISES QUESTIONS ABOUT PRACTICE'S ORIGIN

Editorial Staff

In 1991, the scientific world was rocked by the discovery of Otzi, a 5,000-year-old mummified man found in the mountains along the border between Austria and Italy. Named after the Otz valley in which it was discovered, the mummy's body was remarkably well preserved, as were most of his clothing, tools and weapons.

For the past nine years, scientists have examined the mummy's remains thoroughly, learning much about the everyday life of ancient Europeans. One of the most remarkable discoveries was a complicated system of bluish-black tattoos running along Otzi's back, right knee and left ankle.

While most tattoos are ornamental in nature, the tattoos found on Otzi's body were in the form of simple stripes or crosses. They were also found in places that would normally be covered by hair or clothing. Since such non-ornamental tattoos had previously been found in similar locations on mummies in Siberia and South America, some researchers speculated that the lines on Otzi's body were of therapeutic importance.

What, if any, significance did the ice man's tattoos have beyond ornamentation? A group of scientists from the University of Graz in Austria attempted to answer that question by theorizing a possible relationship between the tattoos and traditional acupuncture points. Their findings, first published in *The Lancet* in 1999 and updated in *Discover* magazine earlier this year,^{1,2} purport to show that acupuncture – or a system of healing quite similar to it – may have been in use in central Europe more than 2,000 years earlier than previously believed.

The research team, led by Drs. Leopold Dorfer and Max Moser, first calculated the mummy's cun by measuring its femur, tibia and radius. They then converted the measurements of the tattoos to cun and overlaid the locations of the tattoos to topographical representations of Chinese acupuncture points.

Experts from three acupuncture societies then examined the locations of the tattoos. In their opinion, nine tattoos could be identified as being located directly on, or within six millimeters of, traditional acupuncture points. Two more were located on an acupuncture meridian. One tattoo was used as a local point. The remaining three tattoos were situated between 6-13mm from the closest acupuncture point.

Table I: Location of tattoo groups on the Tyrolean ice man ("Otzi") and their relation to classical acupuncture points.

Tattoo location and shape	Acupuncture point	Distance between tattoo & acupuncture point (mm)
Left back		
Upper four lines	UB21	4
Upper three lines	UB22	3
Lower three lines	UB23	0
Lower four lines	UB25	0
Right back		
Four lines	UB24	13
Right leg		
Cross on knee, medial	Li8	0
Three lines, medial	Ki7, SP6	0
Three lines, frontal	Local pt between GB40 and ST41	N/A
Upper three lines, lateral	On GB meridian	N/A
Two lines, lateral	GB37, dorsal to fibula	7
Lower three lines, lateral	GB38, dorsal to fibula	6
Left leg		
Seven lines, dorsal	Ub56	2
Three lines, dorsal	On UB, Between UB58 and UB59	N/A
One line dorsal	UB59	0
Dorsal cross at lateral malleolus	UB60	4

X-rays of the ice man's body revealed evidence of arthritis in the hip joints, knees, ankles and lumbar spine. Nine of the mummy's 15 tattoos are located on the urinary bladder meridian, a meridian commonly associated with treating back pain. In fact, one of the mummy's two cross-shaped tattoos is located near the left ankle on point UB60, which is considered by several texts a "master point for back pain."³⁻⁵

"The fact that not randomly selected points, but rather corresponding groups of points were marked by tattoos, seems especially intriguing," the researchers noted. "From an acupuncturist's viewpoint, the combination of points selected represents a meaningful therapeutic regimen."

Forensic analysis of the mummy also revealed that his intestines were filled with whipworm eggs, which can cause severe abdominal pain. Five other tattoos located on the body corresponded with points located on the gall bladder, spleen and liver meridians — points that are traditionally used to treat stomach disorders.

"Taken together," the scientists added, "the tattoos could be viewed as a medical report from the stone age, or possibly as a guide to self-treatment marking where to puncture when pains occur."

Admittedly, not all of the tattoos matched up precisely with known acupuncture sites; one tattoo, in fact, was located more than half an inch from the nearest acupuncture point. The scientists theorized that these differences in location "might be explained by twisting of the Iceman's skin relative to underlying structures that may have occurred during 5,000 years in the ice." They also acknowledged that some tattoos "are partly shifted today out of symmetry according to their location on the twisted body."

Despite these small variations, the discovery of therapeutic tattoos on a mummy who died more

than 2,000 years before the appearance of acupuncture as it is known today raises some interesting questions as to where this form of care originated and how long it has been practiced.

"The locations of the tattoos are similar to points used for specific disease states in the traditional Chinese and modern acupuncture treatment," the scientists concluded. "This raises the possibility of acupuncture having originated in the Eurasian continent at least 2000 years earlier than previously recognized."

"At the time when Otzi was around, I'm sure that many shamanistic cultures worldwide might have practiced it," added Dr. Moser. "But only the Chinese formalized it and saved it into modern times."

References

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