

ELABORATION OF THE MISSISSIPPI MEDICINE ARTICLE—AIMED PRIMARILY AT
SURGICAL AND MEDICAL AUDIENCES

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The article was aimed for a law audience and as such left out the technical details that would interest surgeons and medical professionals. For that group a more meticulous telling would be desirable.

The nerve and vascular injuries attributed to the whole hand would have been more accurately described as involving the thumb, as the bulk of the blast involved the radial half of the hand.

The explosion of the gun sent a large piece of shrapnel—the left half of the barrel chamber—outward, ripping through the thenar eminence of my left hand, avulsing the thumb through the carpometacarpal joint, the thumb remaining attached by about one inch of skin, subcutaneous tissue, and the extensor tendons. Both digital arteries and both digital nerves were destroyed and the thenar muscles were heavily impregnated with fragments of brass, walnut wood, and unburned smokeless powder, the latter material coming from a secondary explosion of a cartridge in the magazine, located just under the chamber of the gun.

Other injuries included a traumatic amputation of the long finger through the PIP joint, and a gouged out defect of skin, subcutaneous tissue, and bone through the DIP joint of the ring finger on the radial side.

There was a fracture of the proximal phalanx of the index finger which was not recognized initially, and it healed with about 45 degrees of dorsal angulation.

Primary healing was accomplished, but at that point the thumb was fixed, totally insensate, and cold, but viable. Due to the dorsal angulation of the fractured index finger, apposition of thumb and index was impossible, totally eliminating all pinch function. The fourth and fifth fingers had essentially normal range of motion but little useful grasp function and pinch was limited to adduction of those two.

The reconstructive repair performed at the University of Mississippi Medical Center by Dr. Bill Lineaweaver consisted of ray amputation of the third finger stump, transposing the index metacarpal onto the third metacarpal shaft and simultaneously angulating it 45 degrees volarward to compensate for the malunited proximal phalanx, harvesting a sural nerve to graft in two digital nerves, and salvage of skin from the discarded third ray for a full thickness skin graft to deepen the thenar cleft.

Preoperative planning had considered transposing digital nerves and arteries from the discarded third ray to the thumb, but intraoperative findings led to the sural nerve graft, and after eight hours on the operating table, the arterial repair was not attempted, everyone apparently having had enough fun for one day.