



### **G87 Planned Primary Complex Suicide: Captive-Bolt Gun and Hanging — First Reported French Case**

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After attending this presentation, attendees will learn of the first French case of an uncommon form of planned primary complex suicide, the combined application of a captive-bolt gun, and hanging.

This presentation will impact the forensic scientific community by implementing French forensic literature and by illustrating how forensic doctors and crime scene investigators can work together to determine a planned complex suicide.

An exceptional case of suicide with double captive-bolt shots to the head was reported in 2012 by a French team. However, the simultaneous use of a captive-bolt gun and hanging has not been described in France to date.

A complex suicide can be described as one where at least two mechanisms are applied. If the use of these mechanisms is previously intended, then the term “planned” can be used. Moreover, the simultaneous application of the separate mechanisms defines a “primary” complex suicide.

Occupational suicides among farmers in France is unfortunately not an uncommon occurrence. The case of a 58-year-old farmer who committed suicide by captive-bolt gunshot and hanging will be presented. In this case, the victim applied two separate mechanisms to commit suicide. It was apparent that he had carefully planned the simultaneous application of these two mechanisms beforehand, making this case a planned primary complex suicide.

The 58-year-old farmer was discovered in his barn on a late summer evening. His body was hanging from a rope that was tied to a horizontal beam beneath the ceiling of the barn. The body was less than a foot away from a tractor. Shoe and hand prints on the tractor showed that he had climbed on it in order to tie the rope to the beam.

A wound was also found in the occipital region of the farmer's head, and blood flowed from the wound down his back. His feet did not touch the ground, and a metal object was lying less than one meter from them. The object was determined to be a captive-bolt gun. A few blood drops also lay on the ground next to the object. Other blood stains were then found on the edge of a second vehicle, a trailer, which stood more than 2 meters away from the tractor and the corpse. This meant that the farmer had stood on the edge of the trailer and triggered the bolt gun. The measurements carried out on the scene showed that the victim could not have tied the rope to the beam while he was on the edge of the trailer.

This study thus determined that the farmer had first climbed on his tractor to fix the rope to the beam. He then held the rope, climbed on the edge of the trailer, and tightly tied the loose end of the rope around his neck. Next, he held the captive-bolt gun behind his head and shot. The gun instantly pierced a hole in his occipital bone and his body fell off the edge of the trailer and hanged itself. This shows the extent to which the man planned this act. Given that his body could not have remained in equilibrium on the edge of the trailer after the gunshot, hanging occurred immediately, thus defining a primary complex suicide.

Autopsy showed an oval hole in the occipital bone, measuring 1.5cm high and 1.3cm wide. The soft tissue around it showed hemorrhage. Inside the skull was found a subdural hematoma, an intact brain, but with a deep wound of the cerebellum. In the neck region, the right end of the hyoid bone was found broken. Toxicology reports showed a postmortem level of 2.9g/L of ethanol in blood. With the wound to the cerebellum not being instantly fatal, it was concluded that death was due to a combination of hanging and captive-bolt gunshot to the head.

Complex suicide cases are not common. They are always a puzzle for the forensic doctors who need to carefully analyze the mechanisms before concluding the case was a suicide. Insight can be obtained from precedent cases, and thus the implementation of forensic databases with uncommon cases is useful.

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#### **Complex Suicide, Captive-Bolt Gun, France**