

An Enigmatic Death in Farm Chopping Machine

Is This the Perfect Murder?

Sara Gioia, MD, Massimo Lancia, MD, Mauro Bacci, MD, and Fabio Suadoni, MD

Abstract: Forensic autopsy, like the other sectors in medicine, has benefited from the technological progress and the creation of multidisciplinary teams to unveil more and more finely planned criminal intents.

Forensic pathologists, however, can sometimes deal with very enigmatic cases, meeting so with the limits of their own knowledge. Therefore, in these cases, they must not allow themselves to be pressured by inquiring agencies, remaining instead always faithful to empiric observations.

With regard to that, we present a peculiar case of death by shredding inside a grinding machinery. The magistrature consequently opened a dossier for willful murder. Lots of figures were appointed to solve the case and among them is the forensic pathologist. However, a great number of obstacles were put in the investigators' inquiries.

Was it a perfect murder?

Key Words: perfect crime, accident in farming, shredding injuries, farm fatalities, cutting up

(*Am J Forensic Med Pathol* 2015;36: 196–198)

Forensic pathology is a discipline of connection between medicine and law. Both clinical reasoning and forensic one follow the same logic that the first, starting from the assessment of signs, arrives at the diagnosis of disease and the second, starting from the takeover of evidence, arrives at the setting out of facts in legal matters.

The forensic pathologist, therefore, acts on the following 2 levels: as a doctor while applying the logical-diagnostic reasoning and as a detective while tracking down a crime. After all, Sherlock Holmes, the most famous detective in the worldwide literature, has been created by a medical doctor, Sir Arthur Conan Doyle, inspired for his character from Joseph Bell, one of the fathers of modern medicine.

Going on in the technology, medical practice has benefited from a great improvement. Like other sectors of medicine, forensic autopsy has derived advantage from technological progress to solve more and more complex cases and unveil more and more subtly planned criminal plots.

Sometimes, however, there are cases where the forensic pathologist, although skilled and helped by a multidisciplinary team, is almost unable to settle cases efficiently.

In this respect, we present a peculiar case of death by cutting up in a chopping-mixing wagon.

CASE REPORT

Around 7:00 PM of February 2, 2012, Mr C.F., a farm owner, called the police and said he could not find his wife. He was afraid she was dead.

Manuscript received November 7, 2014; accepted March 21, 2015.

From the Section of Legal Medicine, Department of Surgical and Biomedical Sciences, University of Perugia, Perugia, Italy.

The authors report no conflict of interest.

Reprints: Massimo Lancia, MD, Section of Legal Medicine, Department of Surgical and Biomedical Sciences, University of Perugia, Piazza Lucio Severi 1, 06121 Perugia, Italy. E-mail: lancia.massimo@libero.it; massimo.lancia@unipg.it.

Copyright © 2015 Wolters Kluwer Health, Inc. All rights reserved.

ISSN: 0195-7910/15/3603-0196

DOI: 10.1097/PAF.0000000000000160

Thus, officers came to the farm and Mr C.F. said that on that day, just like the other days, he had started up the chopping-mixing wagon at around 4:45 PM to produce forage for his cattle. That machinery was generally activated for approximately 30 minutes to be then deactivated straight after.

Mr C.F. told the police that, during that day, he had started up the engine at the same time as usual and then he had to go away. For this reason, he had asked his wife to switch off the engine after its usual 30 minutes of work.

Moreover, Mr C.F. told the officers that around 6:30 PM, he came back home where he could not find his wife. Once gone to the stable to attend the cattle, he had seen that the engine was strangely still on.

While examining it, he saw something that drew his attention. In the forage inside the machinery, there was one of his wife's gumboots that she had put on that very day.

The police made an on-the-spot investigation that produced the following:

- the engine, powered by a tractor, was 3.4-m long, 2.2-m large, and approximately 2-m deep, thanks to its wheels it stood 40 cm far from the ground;
- it was opened at the top, and it showed, at the bottom, 2 augers equipped with star-shaped knives to mix and crumble the forage; and
- it showed a front footboard, at approximately 1.8 m from the ground (Fig. 1), and a back opening, at approximately 1.4 m from the ground (Fig. 2).

The contents of the machinery, moreover, were removed; fragments of clothes and osteomuscular and skin tissues were found in the front part of the right auger.

The contents were classified according to the areas of their recovery (the engine front and back parts) and boxed.

The boxes were carried to the Forensic Medicine Institute in Terni where the forensic pathologist found the following (mixed in the forage):

- lots of bony, muscular, skin, and viscera tissues fragments of a human being and
- lots of clothes lacerated fragments.

Most of them were found mixed in the boxes together with the forage taken from the front part of the engine.

Because of the body's trituration, it was impossible to determine the time of death.

Then, a DNA test proved the tissues to be Mrs G.B.'s and the findings of a toxicological test on some liver and muscle fragments were negative for narcotics, psychoactive drugs, and alcohol. The study was completed with a histological test on some tissue fragments, which showed the presence of hemorrhagic infiltration. In short, death cause was due to a posttraumatic shock by trituration.

An engineering report on the wagon determined that the contents in the front part cannot go to the back one and vice versa, given the characteristics of the engine (Fig. 3).



FIGURE 1. Anterior view of the chopping machine showing the front footboard, at approximately 1.8 m from the ground.

On the basis of what has been reported, it was possible to say that the lady had fallen into the front part of the machinery, where the footboard was.

However, the following question still remained: had the lady fallen accidentally or had she been pushed in?

DISCUSSION

To the best of our knowledge, this is the first case of death by trituration inside a chopping-mixing wagon described in literature.



FIGURE 2. Posterolateral view of the chopping machine showing the back opening, at approximately 1.4 m from the ground.

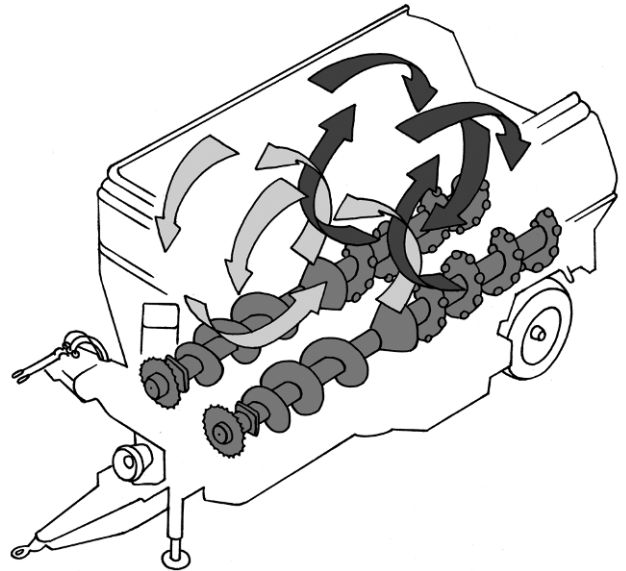


FIGURE 3. Schematic plan showing the inner working of the chopping machine, the contents in its front part cannot go to the back one and vice versa.

Agriculture is one of the most hazardous sectors for workers globally.¹ Among farm fatalities, agricultural machinery has been identified as a principal cause of injuries,² followed by animal-related ones.³ Farm tractors, in particular, have been consistently associated with the greatest number of machinery-related fatalities.⁴ Leading mechanisms of farm fatal injury included tractor rollovers, being struck or crushed by objects, and being run over by machinery.⁵

In international literature, there are some homicide cases committed at work and disguised as deadly professional accidents.^{6,7}

With regard to that, in the case at hand, a file was opened for willful murder because Mr C.F. was suspected of killing his wife, pushing her into machinery.

Upon examination, the one and only conclusion was that the lady had fallen from the front footboard. This conclusion, however, was not useful to inquiries because in case of front fall, the dynamics could be of 2 kinds, accidental and malicious. If the tissue fragments had been found in the back part of the machinery, homicidal dynamics would have been proven definitely, because, given the characteristics of the machinery, it is impossible to accidentally fall into it from the back.

Despite many pressure by inquiring agencies, the forensic pathologist did not affirm if the fall had been accidental (or perhaps due to a collapse) or if there had been the connivance of a second person who had pushed the woman or stunned her before getting rid of her.

Even police inquiries did not come to a significant end. Therefore, after long proceedings and investigations, the case was dismissed, being impossible to establish if a homicide or a deadly professional accident had occurred.

According to Italian Law, when a conviction is proposed, there must be an absolute certainty, beyond reasonable doubt, that an offense has been committed.

Therefore, the question is, was this the perfect crime? Based on what literature says, perfect crime is the crime whose existence will never be suspected because the death, owing to the circumstances or thanks to the criminal's cleverness, is taken to be a suicide, an accident, or by natural causes.⁸

Hence, the case at hand is not a perfect crime because the crime hypothesized.

Is this an unpunished crime then? Unpunished crimes are such for the following several reasons that may occur together: lack of witness, inaccuracy of testimony, scarcity of material clues, unidentifiable, mutilated, or decomposed body, a badly made inquiry, and among others.⁸

This case cannot be considered among the unpunished ones, because there is no absolute certainty that it was actually a crime and not only an accident, being so an indefinable case, which does not allow any final judgment.

The case in question is a real dead end, but the suspicion of murder remains. In addition, even if, from a criminological standpoint, it is impossible to assign the case to either of the 2 categories listed previously (perfect crimes and unpunished crimes), we believe that, owing to the impossibility of any medical diagnosis, strictly from a medico-legal point of view, this could be considered a real example of perfect murder.

CONCLUSIONS

Forensic pathologists, who are charged to solve criminal-legal cases, can sometimes meet with the limits of their own science. Therefore, in these cases, they must not allow themselves to be pressured by inquiring agencies into tailoring facts to fit the prosecutor's theory.

To carry out their own task in the best possible way, forensic pathologists should always remain faithful to the empiric observations.

REFERENCES

1. Douphrate DI, Stallones L, Lunner Kolstrup C, et al. Work-related injuries and fatalities on dairy farm operations-a global perspective. *J Agromedicine*. 2013;18(3):256–264.
2. Dogan KH, Demirci S, Sunam GS, et al. Evaluation of farm tractor-related fatalities. *Am J Forensic Med Pathol*. 2010;31(1):64–68.
3. Young SK. Agriculture-related injuries in the parkland region of Manitoba. *Can Fam Physician*. 1995;41: 1190–1197.
4. Myers JR, Layne LA, Marsh SM. Injuries and fatalities to U.S. farmers and farm workers 55 years and older. *Am J Ind Med*. 2009;52(3):185–194.
5. Voaklander DC, Hartling L, Pickett W, et al. Work-related mortality among older farmers in Canada. *Can Fam Physician*. 1999;45: 2903–2910.
6. Davis GJ, Collins KA. Death by bull-edger. An unusual homicide using a woodworking implement. *Am J Forensic Med Pathol*. 1995;16(1):69–73.
7. Betz P, Eisenmenger W. Homicide of a supervisor simulating an occupational accident [in German]. *Arch Kriminol*. 1992;190(5–6): 151–155.
8. Fanton L, Miras A, Tilhet-Coartet S, et al. The perfect crime: myth or reality? *Am J Forensic Med Pathol*. 1998;19(3):290–293.