

Criminal Investigation and Odontology

This text, originally based on the speech given at the Japanese Society of Forensic Dental Science on 13 June 2009 by Akira MITSUZANE, former head of the Identification Division of the Tokyo Metropolitan Police Department (TMPD), appeared in "BAN", a monthly magazine targeted mainly for police officers in March 2010

1. Reasons for need for early personal identification

When finding the corpses, we police officers need to quickly determine whether there was any foul play involved. Corpses are found under a variety of circumstances. Sometimes it is instantly clear from circumstances that they died through criminal acts. There are times, however, when it is so difficult for us to determine how they died and what led to their death.

a. Striving for early apprehension of the suspects

If the identity of the corpse is unknown, we will first go through the process of determining who he is. When it is difficult to determine through the corpse if there was any foul play involved, we interview those around him, such as his next of kin, friends, acquaintances, and work colleagues.

In criminal cases involving abandonment of a corpse, we often say we would be 80% successful, if we identified the corpse. Personal identification of the corpses is therefore an important element of criminal investigation, as it has the potential of rapidly moving the investigation forward.

b. Fulfilling our obligation to the public

Furthermore, it is our societal obligation to inform the public of the truth behind the corpses. We believe we can fulfill our obligation by informing them of the identity of the corpses through the media.

c. Returning the corpses to the next of kin

In order to return the corpses to the next of kin, it is also important that we quickly determine the identity of the corpses.

2. Case studies for successful identification of the corpses with the help of forensic odontologists (Tokyo)

a. Burn death of a driver who caused a major traffic accident on the highway

On a night in the summer of 2003, a foreign-made sports car skidded on the highway while trying to overtake another car. It eventually crashed into a traffic signal pole and went up in smoke. The driver was found dead.

As the corpse was badly damaged, we asked Professor Toshinobu KOMURO of Nihon

University to assist us in the identification of the corpse. Through checking dental records, we were able to identify the driver in the end.

b. Murder and abandonment of the corpse of a female company executive

In the spring of 2005, a female company executive went abruptly missing. It was revealed through interviews with those around her that she had trouble with a man from the same company over real estate deals. The TMPD initially arrested the man on separate charges. During interrogation, he confessed that he had murdered the woman and abandoned her body.

In August of the same year, the woman's decomposed corpse was found in the woods in Shizuoka prefecture and was transported to the local police station in Setagaya, Tokyo for an autopsy. Odontologist Shigeo INOUE, a member of the Setagaya Dental Association in Tokyo, identified the corpse as that of the woman through X-rays.

c. Discovery of a naked female corpse in the Tama River

In the early morning in the summer of 2004, the naked corpse of a woman was found in the Tama River. The investigation revealed that she looked similar to a woman who was reported as missing at the local police station. Odontologist Kazumi HIROSE of the dental clinic, where the missing woman went regularly, was called in for assistance. HIROSE examined the teeth of the corpse and by cross-checking the missing woman's dental records, identified the corpse as that of the missing woman. The TMPD concluded that she had fallen into the river while loitering late at night.

d. Murder and abandonment of the corpse of a woman

Late at night in the spring of 2006, a female part-time employee of izakaya (Japanese-style pub) went missing after she parted with her male friend. In September of the same year, the TMPD arrested the man on separate charges and continued to ask him about the disappearance of the woman. The man confessed in the end and said that he had killed her after getting into an argument over breaking up.

In the following month, skeletonized remains were found in the woods in Shizuoka prefecture. Associate Professor Tamiyuki TSUZUKI of Nihon Dental University was sent to the scene, where he identified the remains as those of the woman through her dental records. The man was later arrested for murdering her and abandoning her body.

3. Three important elements for successful personal identification

a. Identification through fingerprints

b. Identification through teeth

This is a method of identifying the corpses through records on dental treatment, such as medical records, X-rays, and dental charts. Personal identification can be achieved through

arrangement of teeth and characteristics on the indication of dental treatment, which we do not keep track of at the police department. It is therefore important for us to collaborate closely with forensic odontologists. To that end, we have recently installed portable X-rays within the police force and are now in the process of training investigators as X-ray technicians.

c. Identification through DNA

4. Conclusion

As discussed here, personal identification through teeth has played a major role in the field of criminal investigation. It was proved effective as we tried to identify the victims in times of major accidents and natural disasters. In the aftermath of the crash of a Japan Airlines jumbo jet in August 1985, 233 out of 520 passengers who died in the crash were identified through their teeth. In January 1995, when a major earthquake hit Osaka and other Kansai regions, out of 6,434 casualties, 70 were identified through their teeth.

Today, I primarily discussed the importance of identifying humans through their teeth. In fact, by examining one's teeth, we can determine if he was non-Japanese or if he has travelled overseas. We can even tell whether he was a smoker or whether he was wealthy or not. For the benefit of investigation, there is so much to learn from one's teeth. In recent days, instances of child abuse have been detected at the time of dental treatment by odontologists, as they promptly alerted the authorities. I would like to show my deep respect and appreciation for cooperation rendered to us by the Japanese Society of Forensic Dental Science and the Association for Police Odontologists.