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Two autopsy cases in which previous surgery facilitated the positive identification of decomposed bodies

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SUMMARY

The positive identification of decomposed corpses is often difficult. We describe two autopsy cases in which medical materials, which had been implanted during previous surgical treatments, facilitated positive identification. The discovery of decomposed corpses is increasingly common in Japan, due to the increasing number of lonely deaths. Implanted medical materials and devices may be a useful tool for personal identification in the near future.

Keywords: personal identification – implanted medical devices – elderly people – lonely death

Dvě pitvy, ve kterých předchozí operace usnadnila ztotožnění posmrtně dekomponovaných těl

SOUHRN

Identifikace posmrtně dekomponovaného těla je často obtížné. V práci je uveden popis dvou případů, ve kterých usnadnil identifikaci nález chirurgických implantátů.

Případ č. 1: V bytě bylo nalezeno lidské tělo ve značném stadiu hnilobného rozkladu. Předpokládalo se, že může jít o staršího muže, který zde žil sám. Během soudní pitvy byl nalezen v aortě a obou společných ilických tepnách stav po rekonstrukci pomocí syntetických štěpů.

Případ č. 2: Pokročile dekomponované lidské tělo bylo nalezeno ve vaně. Předpokládalo se, že zemřelý byl starší muž, žijící sám v domě. Soudní pitva objevila kovové šrouby, implantované oboustranně v hlavicích stehenních kostí.

V obou těchto případech bylo tedy možné úspěšně přispět k identifikaci neznámých osob na základě záznamů o předchozích chirurgických zákrocích. Nález zemřelých v pokročilém stadium dekompozice je v Japonsku v důsledku rostoucího počtu osaměle žijících starších lidí stále častější. V těchto případech je obtížné používat analýzu DNA, otisky prstů a metody forenzní stomatologie. Snadněji než zubní kartu je možné získat všeobecné lékařské záznamy, a tyto záznamy poskytují značné množství antemortem informací. Chirurgicky implantované materiály jsou trvanlivé a dlouho vydrží. Proto mohou být užitečným nástrojem pro identifikaci neznámých osob.

Klíčová slova: soudní pitva – identifikace – implantované zdravotnické materiály – senioři – smrt beze svědků.

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The positive identification of unidentified corpses is a routine but important task for forensic pathologists, which typically involves DNA tests, finger prints, and dental findings (1-3). However, we often experience cases in which these methods cannot be used. Therefore, we report two cases of decomposed corpses in which positive identification was facilitated by medical materials that were implanted during previous surgical treatments. These cases are good examples of how autopsy is useful for both determining the cause of death and providing a personal identification.

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CASE REPORT

Case 1

Highly decomposed remains were found in an apartment. The deceased was assumed to be a man in his sixties who lived alone in the room. Therefore, a medico-legal autopsy was performed to clarify the cause of death and confirm his identity. We diagnosed the cause of death as chronic ischemic heart disease, due to complete coronary occlusion that was found during the autopsy. We also observed that the aorta and common iliac arteries had been rebuilt using a synthetic graft (Figure 1). The inhabitant of the room had undergone implantation of a blood vessel prosthesis for abdominal aorta aneurysm, which allowed us to make a positive identification, based on his medical records.

Case 2

Highly decomposed remains were found in a bathtub. The deceased was assumed to be a man in his eighties who lived alone in the house. We performed a medico-legal autopsy and observed complete coronary occlusion; therefore, we diagnosed the cause of death as chronic ischemic heart disease. We also observed that metallic screws had been implanted in the bilateral femoral heads (Figure 2). The inhabitant of the house had

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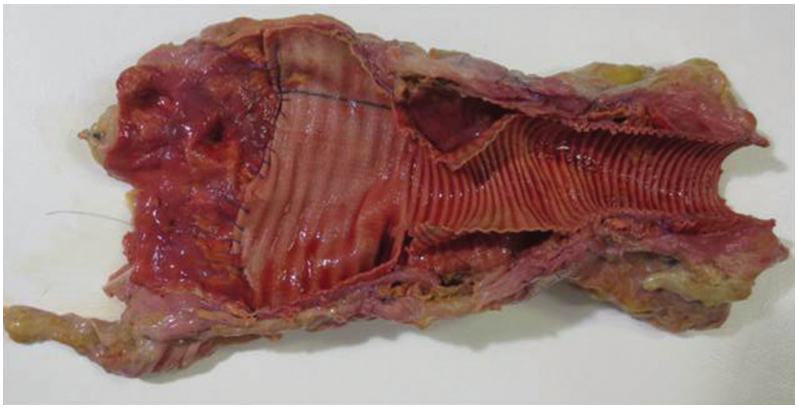


Figure 1. A synthetic graft that was found in the abdominal aorta of Case 1.



Figure 2. Screws that were implanted in the femur of Case 2.

a history of bilateral femoral bone fractures and had been treated using compression hip screws, which allowed us to make a positive identification, based on his medical records.

DISCUSSION

In these cases, two elderly deceased men who lived alone were found in a highly decomposed state. In Japan, it is not uncommon for single elderly people to have no relatives, which can significantly delay the discovery than an individual has died. As the corpses were highly decomposed, it was impossible to obtain fingerprints, and DNA testing is only useful if there are DNA samples available from the deceased individual's family members. Moreover, both deceased individuals did not have a dental history and no dental charts were available. However, medical records are easier to obtain, compared to dental charts, and provide a significant amount of antemortem information regarding the victim. As surgically placed medical materials and devices are durable and last for a long time, they are useful for personal identification, and several previous reports have described the usefulness of medical materials and devices in the identification process (4,5). Unfortunately, lonely death due to social isolation has become an increasingly common phenomenon in Japan. Therefore, given the recent advances in medical technology, implanted medical materials and devices may be a useful tool for personal identification in the near future.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this paper.

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