



Pathology/Biology Section - 2014

G109 Unusual Case of Asphyxia Due to an Excessive Use of Denture Glue

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After attending this presentation, attendees will be aware of the possibility that denture glue can be dangerous and, especially in people with mental disorders, can cause asphyxia and death.

This presentation will impact the forensic science community by providing an unusual case of asphyxial death by aspiration of denture glue, which is very uncommon because the denture glue is safe if properly used.

In March 2013, a 60-year-old woman was found unconscious, supine in the bathroom of her house by her son. He called for help and started cardiopulmonary resuscitation. Physicians arrived about 15 minutes later; however, the cardiopulmonary resuscitation attempts were unsuccessful and she was pronounced dead at the scene. Physicians noticed that a large amount of white sticky material was in the mouth. They also found the upper denture plate, which was then removed. The woman's husband reported that she used an excessive amount of denture glue and that she suffered from psychiatric disorders, particularly depression, so she was in therapy with antidepressant and antipsychotic drugs.

The autopsy was performed the day after the body was found. The decedent was a 60-year-old woman. At the time of the autopsy, the well-preserved body was found to be 160cm in length and weighed 55kg. On the external examination of the corpse, no macroscopic evidence of trauma was found. Abundant whitish sticky material completely filled the mouth and flowed out. At the autopsy examination, the same material was found in the pharynx, larynx, esophagus, and stomach, filling them completely and almost reproducing their shape. The denture glue obstructed the larynx, clogging the passage of air into the lungs. Pulmonary edema and congestion was also found. Toxicological exams were performed on samples of blood, bile, urine, and gastric contents, but they only showed therapeutic levels of the antidepressant and antipsychotic drugs that she was taking. Histological examination was performed which confirmed the pulmonary edema and congestion.

After the macroscopic and microscopic analysis, the cause of death was identified as acute mechanical asphyxia, caused by massive aspiration and ingestion of denture glue. This cause of death is also compatible with the circumstantial data. In fact, the woman's husband reported that she suffered from mental disorders and she used a lot of denture glue to prevent detachment of the denture. This case is remarkable because the use of denture glue is generally safe and no other cases of asphyxial death caused by aspiration of denture glue are reported in the literature.

Denture Glue, Asphyxia, Airways Obstruction