

Death due to traumatic tracheo-brachiocephalic artery fistula: an autopsy case

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SUMMARY

Tracheo-brachiocephalic artery fistulas were rarely reported lesions often described in cases with tracheostomy procedures. Reported case was 26 year-old male drainage worker, trapped under the stony soil while excavating drainage canal. Rescue operation was performed, but he was reached dead. Provincial prosecutor mandated autopsy after crime scene investigation. Autopsy examination revealed traumatically formed tracheo-brachiocephalic fistula. We aimed to report an interesting case of traumatic tracheo-brachiocephalic artery fistula identified in forensic autopsy.

Keywords: trauma – tracheoarterial fistula – autopsy

Smrt způsobená úrazovou píštělí mezi tracheou a truncus brachiocephalicus - popis případu

SOUHRN

Traumatická píštěl mezi tracheou a truncus brachiocephalicus je vzácná léze, častěji popisovaná spíše po tracheostomiích. Je uváděn případ muže starého 26 let, který byl při práci zavalen kamenitou půdou při hloubení odvodňovacího kanálu. Když dorazila záchranná služba, byl již mrtvý. Po ohledání místa činu byla nařízena soudní pitva, která odhalila tracheo-brachiocephalickou píštěl traumatického původu.

Klíčová slova: trauma – tracheoarteriální píštěl – pitva.

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Tracheo-brachiocephalic artery fistulas were extremely rare diagnosed (1,2). As unusual lesion tracheo-arterial fistula often described in cases with tracheostomy procedures and post-intubation period, was not included among the differential diagnosis of massive hemoptysis (3,6). Reported is the traumatic tracheo-brachiocephalic fistula case identified in forensic autopsy.

CASE REPORT

Presented case was 26 year-old male drainage worker. According police investigation document co-workers claimed that while victim was working in 4.5 m deep drainage canal with co-worker a small landslide of soil underwent and two workers were trapped under the stony soil while excavating drainage canal. Rescue operation was performed, first worker was rescued alive in few minutes but the second was reached dead after 8 minutes. Provincial prosecutor mandated autopsy after crime scene investigation. Des-

ceased was, 180 cm in height and 85 kg in weight men. On gross external examination dust and soil covering face, bleeding from the mouth and nose were detected. Cyanosis of the nail beds, wide bruises on chest and left lumbar region were observed. Autopsy macroscopic investigation revealed blood aspiration areas on lung surfaces, left lung weighed 750 gr, right lung weighed 610 gr, intraparenchymal blood aspiration areas on lung dissection were also examined. Tracheal examination showed intensive massive bleeding, 1.5 cm ecchymotic laceration area in trachea situated 5.8 cm below the rima glottidis was inspected (Figure 1), in correspondence with these lesion on aortic dissection, 2.3 cm laceration area in the lumen just above on division of truncus brachiocephalicus, traumatically formed tracheo-brachiocephalic fistula was determined (Figure 2). The direct cause of bleeding was detected tracheal and brachiocephalic arterial injury with coexistence of fistula. Microscopic examination of the internal organs was unremarkable, only lungs revealed blood in the lumina of peripheral bronchi and pulmonary alveoli. Investigation of the blood, urine, and organ specimens revealed none of the substances screened in systematic toxicological analysis. After autopsy the death was reported as massive bleeding caused by traumatic tracheo-brachiocephalic artery fistula.

DISCUSSION

Tracheo-brachiocephalic artery fistulas were diagnosed between 0.6% to 0.7% in post tracheostomy patients within one month

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