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AUTOPSY FINDINGS IN UNEXPECTED DEATH ASSOCIATED WITH "ICE BLOCK THERAPY" TRIGGER HYPOTHERMIA: A CASE REPORT

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Abstract

Introduction: *Indonesia is one of the developing countries that have various cultures, ethnicities, and mysticism. Those things influence their society, especially the people in the low middle class and uneducated well. Many people still believe that a disease can occur due to mystical things, so they believe that a dukun can treat it, even if the process is illogical. This phenomenon nowadays still exists in society. Dukun usually has his way to cure or solve someone's diseases, even though his methods to cure someone's diseases usually do not have evidence-based and the diseases need to see professionals. It shows in this case. Dukun in this case used ice blocks as his method to cure someone's disease. This "ice blocks therapy" may trigger hypothermia conditions in someone and also may cause death, especially in a person with chronic disease. The range temperature in the Jember Regency between 21-31°C which makes hypothermia rarely found here. The case will present in this paper.* **Case report:** *In this case, we present an interesting case about the use of ice blocks, called "ice blocks therapy" and then considered as a therapy method and an unexpected death.* **Conclusions:** *Review of patient history, postmortem findings, forensic pathology, and socio-cultural aspects are some of the keys to solving the problem. In this case, hypothermia through ice block therapy plays a role in decreasing organ function which results in death*

Keywords: *Autopsy, dukun, forensic pathology, hypothermia, Ice block therapy.*

Introduction

Indonesian citizens' socio-cultural phenomena are varied and attractive, such as the belief in someone who can cure various diseases, called "*dukun*". *Dukun* is a term commonly used for someone who is believed by society that have spiritual ability and knowledge to solve people's problems or to cure their diseases. For some *dukun*, the word "*dukun*" has negative connotations so they prefer to call themselves "*paranormal*". However, their presence is often controversial [*Sartini, Ahimsa-Putra HS, 2017*]. Frequently, the condition of someone's disease gets worse and even causes fatalities due to the illogical treatment method used by them.

Nowadays, the existence of a *dukun* is stay still because of the people's belief and public trust. Many people still believe that a disease can occur due to mystical things, so they believe that a *dukun* can treat it, even if the process is illogical. People who suffer from chronic diseases and have particular diseases that are difficult to cure believe that a *dukun* can cure them. Also, they are usually tired of the prohibitions given by the doctors, while *dukun* rarely gives them prohibitions. In some cases, people also feel that they can not afford to pay for the hospital, so they just turned to a *dukun*. In this case report, we will discuss the case of a 7 years old child

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with congenital heart disease who allegedly died after receiving "ice block therapy" by a *dukun*.

Exposure to low-temperature object becomes a threat to an individual's health. It is associated with an increased risk of death. The increase of death due to extreme temperature has been reported in many countries. As a tropical country, Indonesia has a rare occurrence of hypothermia. According to the Indonesian Meteorological, Climatological, and Geophysical Agency, the range of temperature in the Jember Regency is between 21-31- which makes hypothermia rarely found here.

Hypothermia is a condition where the body temperature is less than 35°C. Based on causality, hypothermia can be divided into primary and secondary hypothermia. Primary hypothermia is caused by body exposure to cold temperature in healthy individuals, while secondary hypothermia is caused by impaired heat regulation due to underlying clinical conditions, such as chronic disease, poisoning, and patient old age patient [*Kenan K et al., 2017*].

Death-related hypothermia still becomes one of the cases where the diagnosis is quite difficult due to the lack of specific diagnostic findings at autopsy [*Søreide K, 2014*].

In this case, therapy using ice blocks that trigger hypothermia can make the heart performance of the patient with atrial septal defect (ASD) condition more severe. In addition, this therapy can trigger complications like damage to several organs.

Case Report

A 7-years old female corpse was taken by the investigator to the Dokter (dr.) Soebandi Hospital of Jember accompanied by a postmortem examination request letter. Based on the investigator's statement, the child died at the *dukun*'s house after receiving ice blocks therapy the day before.

The patient's parents explained that when the child was 2 years old, she was diagnosed with congenital heart disease. According to the doctor's explanation, the defect is not severe and will usually close on its own. On her disease progression, her parents had been suggested to come to a *dukun*, so that, her condition could improve soon. At the *dukun*'s place, her parents were informed that there

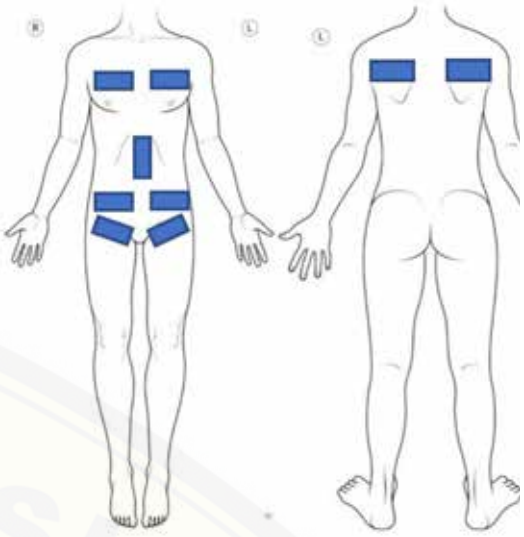

***Figure** 1: Illustration of ice blocks position on patient's body*

was a "Jinn" (supernatural creatures like spirit or demon) in the patient's body and had to be treated intensively. Her parents agreed and then the patient was treated by ice blocks on her body. This such therapy can be called Ice Blocks Therapy.

The *dukun* performed placing the ice blocks on the patient's body. An illustration of the placement of ice blocks on the patient's body had shown in figure 1. This therapy had been going for the last 3 months. During the last 3 months, the patient received the ice blocks therapy twice a week. In each therapy session, the patient was exposed to several ice blocks for about 2 hours. The size of each ice block was approximately 15 cm x 25 cm x 10 cm with approximately about 500-1000 grams of weight.

According to her parents, the patient was dead on Wednesday, November 24th, 2021, approximately at 04.30 pm. It was about 36,5 hours after the ice blocks exposure. On Monday, November 22nd, 2021, the duration of ice blocks exposure was longer than usual. The duration of ice blocks exposure for about 4,5 hours (Monday, November 22nd, 2021 at 10.00 pm until Tuesday, November 23rd, 2021 at 02.30 am).

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FIGURE 2: Erythema on the neck and chest

According to her parents' explanation, deterioration of consciousness was seen in the patient. Then, the parents took her back to the *dukun*'s place and the patient got a seizure for about 30 minutes. Later on, the *dukun* pressed on both sides of her palmar and plantar, followed by scraping her body. The dukun claimed that it might pull the *jinn* out from her body so that her condition could improve soon.

External Examination

On external examination, erythema was found on the neck and chest (see fig. 2). A reddish color also appears on both knees of the corpse (see fig. 3a and 3b). The abdomen looks distended with an abdominal circumference is 63.5 cm and the blood vessels are dilated.

The lower extremities revealed the appearance of cutis anserina (goose flesh or goose skin) (see fig. 4a and 4b).

The enlargement of the ends of the fingers and toes accompanied by downward sloping of the nails were found (clubbing fingers) (see fig. 5a, 5b 5c and 5d).

We also found several injuries or wounds on the surface of the body. Injuries or wounds found are

FIGURE 3: Redness on the knees (A) Right knee; (B) Left knee

FIGURE 4: Cutis anserina on lower extremities (a) Right leg; (b) Left leg

FIGURE 5: Clubbing finger (a, b)Clubbing finger in the hand; (c, d) Clubbing finger in the feet

FIGURE 6: Injuries or wounds found are abrasions and bruises. (a) Abrasion on the back, (b) Abrasion and bruise on palm and (c) Abrasion on the plantar pedis

abrasions and bruises. The abrasions were found on the back (see fig. 6a), palms (see fig. 6b), and plantar pedis (see fig. 6c). Bruises were found on the palms of the hands and feet.

Internal Examination

On internal examination, there was blood seeps in the chest muscle (see fig. 7a). The heart was dilated (11.5cm x 11 cm x 10.5 cm) than normal size. There was a defect in the interartrial septum (see fig. 7b). Enlargement of the liver appears blackish red, supple consistency, blunt edges, glossy surface with size 21 cm x 13,5 cm x 5,5 cm. There is a bump on the back with a size 6 cm filled with pus (see fig. 7c). Also, erythematous of the inner mucosal lining in the stomach was identified (see fig. 7d).

Furthermore, 1700 ml of clear yellow fluid was found in the abdominal cavity, 400 ml in the right chest cavity, 400 ml in the left chest cavity, and 100ml fluid fills the pericardium's space.

In this case, five samples of the organ were sent for histopathological examination at the Pathology Anatomy Laboratory of dr. Soebandi Hospital of Jember. The five samples of organs were gastric fundus area, liver, pancreas, right kidney, and heart. Gastric tissue collection is only carried out at the fundus because the stomach and its contents will be subjected to toxicological analysis

Macroscopically of the gaster, the outer surface is smooth and the inner surface of the gastric mucosa is indented. Microscopically, there is a picture of chronic erosive inflammation and congestion in the gastric fundus area. The mucosa with foveola and tubular glands was benign/non-atypical, areas of erosion on the epithelial surface, dilated blood vessels in the mucosa and submucosa, and lymphocyte infiltration in the lamina propria (see fig. 8a).

Macroscopically, the outer surface of the liver is smooth, the parenchyma is red with white patches between them. Microscopically, extensive hemorrhagic and extensive fatty liver were found. The hepatocyte cells are arranged to form a lamel-

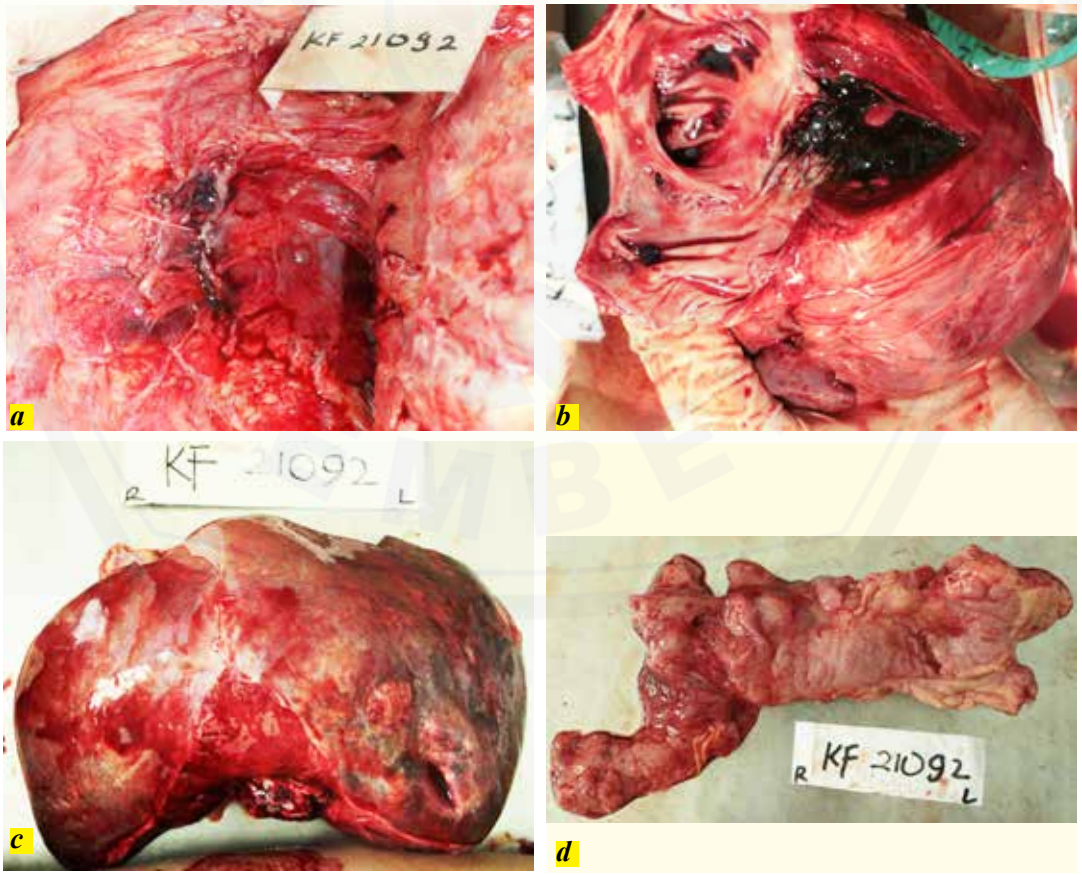

***Figure** 7: During the internal examination of th organs, it was oserved (a) Blood seeps in the chest muscle, (b) Defect on the interatrial septum of the heart, (c) Enlargement of liver, (d) Erythematous of the stomach.*

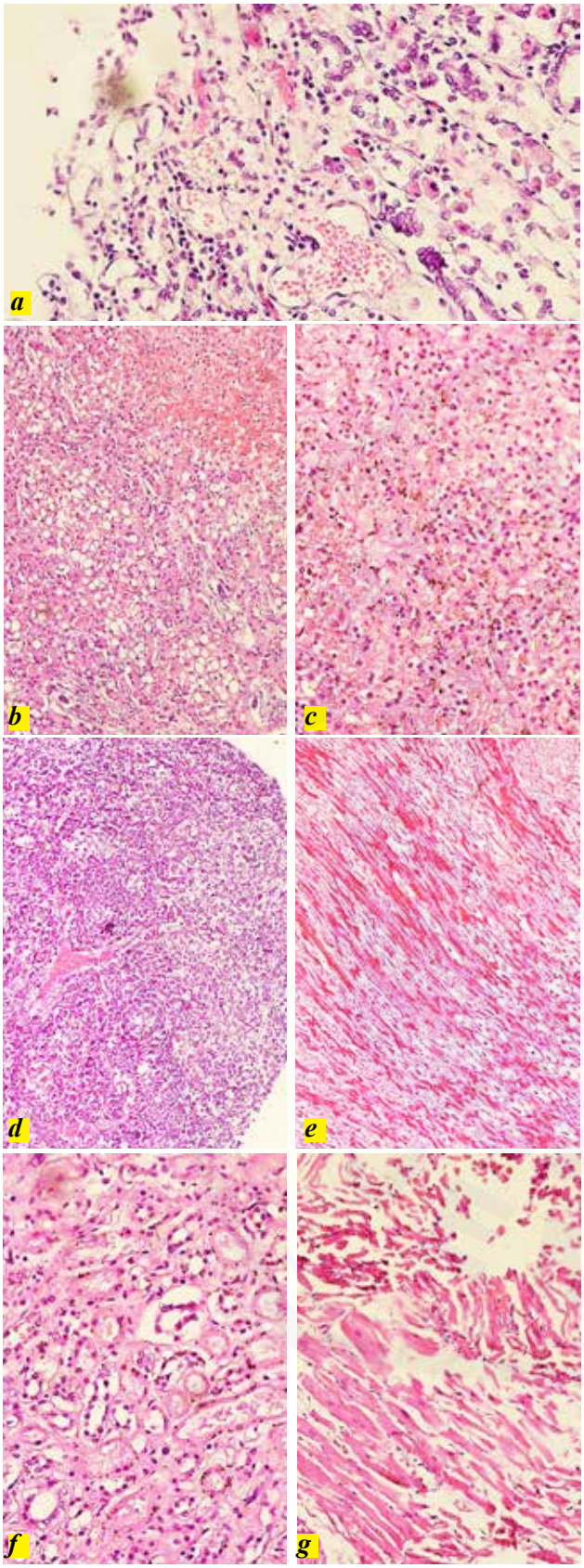

FIGURE 8. *Histopathological examination of five organ samples was performed: (a) Gaster congestion, (b) fatty liver, (c) hemosiderophage of liver, (d) pancreatic congestion, (e) renal congestion, (f) basal vacuolization in renal tubular epithelial, (g) cardiac hypertrophy*

lar structure, mostly there is extensive bleeding/ erythrocyte infiltration around the hepatocyte cells. The hepatocyte cells mostly contain vacuoles in the intracytoplasmic/ extensive fatty liver (see fig. 8b). There are also lymphocyte infiltration and hemosiderophage pigment, the brown color surrounding it (see fig. 8c).

On the pancreatic preparations, macroscopically, the brown parenchyma is multinodular with a few brown spots in between. Microscopically, chronic inflammation and congestion are found in histology preparation. It consists of normal glands accompanied by dilated blood vessels containing erythrocytes and a light lymphocyte infiltrate (see fig. 8d).

Macroscopically of the renal, there is no obvious nodule or abnormal appearance. Microscopically, severe congestions are found (see fig. 8e). The blood vessels are dilated and filled with blood. Basal vacuoles in renal tubular epithelial are found (see fig. 8f).

Microscopically on cardiac preparations, there are mild hypertrophy, congestion, and chronic inflammation were seen. The histology preparations show normal muscle tissue with partially hypertrophied of the muscle tissue (see fig. 8g).

Toxicology analysis are performed in this case. The results of the examination, no cyanide, pesticide/ insecticide, alcohol, narcotics, and psychotropics content was found.

DISCUSSION

The external examination of the body found reddish spots on the skin, neck, chest, and knees, that caused by oxyhemoglobin in the skin capillaries. This occurs because of the low metabolic activity in tissues due to low temperatures so that oxygen-rich blood cannot be channeled [*Saukko P, Knight B, 2015*]. The fingernails of the corpse were also found to be bluish (cyanosis), both on the right and left hands, due to cold temperatures affecting blood vessels to vasoconstrict. These narrow blood vessels make it harder for oxygen-rich blood to get to the tips of your fingers or nails [*Jin HX et al., 2021*].

The skin on both lower extremities was found

to be cutis anserina (goose skin/goose-flesh). This occurs due to stiffness in the erector pili muscle that attaches to the skin follicle and causes bumps on the skin [*Saukko P, Knight B, 2015*]. Cutis anserina is commonly found in the skin of bodies that drown or cold water-related death [*Caruso JL, 2016*].

The hypothermic condition that caused death in this case, was probably the result of treatment by giving ice blocks for about 4.5 hours on the body which was considered as a treatment method by a *dukun*. A person's death due to hypothermia is caused by a failure of the hypothalamic regulatory mechanism that regulates chemical thermogenesis and vasoconstriction [*Byard RW, Bright FM, 2018*]. The impact caused by hypothermia is multiple organ system dysfunctions [*Chen W, 2019*]. Hypothermic conditions in the heart cause a decrease in spontaneous depolarization of cardiac pacemaker cells which can trigger bradycardia and hypotension. Ventricular fibrillation or asystole may occur, resulting in death. Conditions of decreased oxygen supply can occur as a result of the respiratory system so that it can affect the brain [*Jeican II, 2014*].

The abrasions were found on the back, palms, and palmar pedis with irregular shapes, redness, and varying sizes. The abrasions on the palms found were probably caused by the pressure and scratching by the *dukun* during the ice blocks therapy. Friction on the epidermis to exfoliate the keratin layer and the cells beneath it will cause discoloration and exudate fluid [*Saukko P, Knight B, 2015*].

The autopsy examination was found 7 cm x 6 cm of blood seeps in the chest cavity, this was thought to be due to microvascular injury during the ice blocks therapy.

The clear yellow fluid of about 1.700 ml was found in the abdominal cavity, 400 ml in the right chest cavity, 400 ml in the left chest cavity, and 100 ml in the heart cavity. The abdominal fluids (ascites) can occur in some conditions, especially chronic conditions, such as hepatosplenomegaly or hepatomegaly. This condition result from both hepatocellular insufficiency and portal hypertension. In this case, hepatomegaly was found in autopsy examination. This finding can be an indicator of portal hypertension and hepatocellular insufficiency in the patient.

The autopsy revealed enlargement of several organs such as the liver, renal, and heart. Furthermore, the hypothermia in this patient is reflective of metabolic exhaustion likely processes leading to severe organ dysfunction that had already been initiated as a consequence of circulatory failure [*Çetýn S et al., 2015*].

Based on Kushimoto et al, 2020, the hypothermia case demonstrates depletion of energy stores, anaerobic metabolism, and subsequent development of severe organ dysfunction as a consequence of hypoxia-induced cellular injury and circulatory failure. Thus, the high mortality observed in hypothermic trauma patients is a reflection of the severity of multiple organ failure and not an independent adverse effect of hypothermia [*Kushimoto S et al., 2020*].

According to a 2018 study by Ball & Herath, deaths from hypothermia can be found in pancreatic changes including hemorrhage, acute inflammation, and pancreatic adenoid vacuolization. Microscopic examination will show the presence of acute inflammation and necrosis of pancreatic tissue. While the kidney preparations can be found in the presence of subnuclear (basal) vacuoles in the body's epithelial cells. The mechanism underlying renal vacuolization has also not been further elucidated [*Ball CG, Herath JC, 2018*]. These findings are related to the histopathological examination of the pancreas and renal. Moreover, the result of histopathological findings on the liver, like hemosiderophage and fatty liver indicate the condition of chronic disease.

Environmental temperature is known to be an important factor affecting morbidity and mortality. Research has shown that there is a relationship between increased cardiovascular-related mortality and cold temperatures [*Wang SY et al., 2018*]. Supposedly, in this case (patient with ASD), the patient has a high survival rate. This statement is supported by histopathological findings of the heart that showed mild hypertrophy, which indicates that ASD in the patient is not se-

vere. However, continuous exposure to low temperatures will worsen the patient's condition [*Tanghöj G et al., 2020*].

Various mechanisms have been proposed to explain this. Exposure to cold temperatures induces an increase in heart rate, blood pressure, peripheral vasoconstriction, the concentration of plasma fibrinogen, blood cholesterol level, platelet viscosity, and red blood cell count [*Atsumi A, 2013*]. In addition, the respiratory system also responds to the cold temperature by some activation such as bronchoconstriction, airway congestion, and decreased mucociliary clearance, which may play an important role in the symptoms of respiratory diseases, such as asthma and chronic obstructive pulmonary disease [*Fu SH et al., 2018*].

The duration of cold exposure to the human body before death was positively correlated with the surrounding temperature. In submersion hypothermia with water temperature around 5°C, death is usually expected after 1 hour. At dry ambient temperatures, the duration of exposure is estimated to range from 1.5 hours at -30°C to 12 hours at 5°C. Death occurs usually when the core of body temperature reaches about 25°C [*Madea B, 2014*].

In the toxicological analysis, there are no cyanide, pesticides/ insecticides, alcohol, narcotics, or psychotropic substances were found in the patient's body. So, it can be concluded that the patient is not intoxicated or abused with narcotics, psychotropics, and other addictive substances.

Conclusion:

Review of patient history, postmortem findings, forensic pathology, and socio-cultural aspects are some of the keys to solving the problem. In this case, it can be indicated that hypothermia through ice block therapy plays a role in decreasing organ function which results in death

REFERENCES

1. Atsumi, A., Ueda, K., Irie, F., Sairenchi, T., Iimura, K., Watanabe, H., Iso, H., Ota, H., & Aonuma, K. (2013). Relationship between cold temperature and cardiovascular mortality, with assessment of effect modification by individual characteristics - Ibaraki prefectural health study. *Circulation Journal*, *77*(7), 1854–1861. https://doi.org/10.1253/circj.CJ-12-0916
2. Ball, C. G., & Herath, J. C. (2018). Earth, Air, Water, and Fire: Histopathology of Environmental Death. In Academic Forensic Pathology (Vol. 8, Issue 3, pp. 641–652). SAGE Publications Inc. https://doi.org/10.1177/1925362118797739
3. Byard, R. W., & Bright, F. M. (2018). Lethal hypothermia – a sometimes elusive diagnosis. *Forensic Science, Medicine, and Pathology*, *14*(4), 421–423. https://doi.org/10.1007/s12024-017-9916-z
4. Caruso, J. L. (2016). Decomposition Changes in Bodies Recovered from Water. *Academic Forensic Pathology*, *6*(1), 19–27. https://doi.org/10.23907/2016.003
5. Chen, W. (2019). Thermometry and interpretation of body temperature. In *Biomedical Engineering Letters* (Vol. 9, Issue 1, pp. 3–17). Springer Verlag. https://doi.org/10.1007/s13534-019-00102-2
6. Çetýn, S., Ýnanir, N. T., Eren, F., Eren, B., & Dokgöz, H. (2015). Wischnewsky Spots in Fatal Hypothermia: Case Report. *Maedica*, *10*(3), 280–282. http://www.ncbi.nlm.nih.gov/pubmed/28261368%0Ahttp://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC5327835
7. Fu, S. H., Gasparrini, A., Rodriguez, P. S., & Jha, P. (2018). Mortality attributable to hot and cold ambient temperatures in India: a nationally representative case-crossover study. *PLoS Medicine*, *15*(7), 1–17. https://doi.org/10.1371/journal.pmed.1002619
8. Jeican, I. I. (2014). The pathophysiological mechanisms of the onset of death through accidental hypothermia and the presentation of "the little match girl" case. *Clujul Medical*, *87*(1), 54–60.https://doi.org/10.15386/cjm.2014.8872.871.iij1
9. Jin, H. X., Teng, Y., Dai, J., Zhao, X. D., Cao, Y., Chen, C., Chen, W., Fan, C. fang, Fei, J., Gan, L. W., Guo, Y. F., He, J., Huang, Z. G.,

Ji, B. L., Li, N., Li, W. Q., Liu, H. S., Liu, M. H., Liu, S. Q., … Zhu, H. Y. (2021). Expert consensus on the prevention, diagnosis and treatment of cold injury in China, 2020. *Military Medical Research*, *8*(1). https://doi.org/10.1186/s40779-020-00295-z

10. Kenan K, Adnan C, Emrah E, Gulsum OE (2017) The Evaluation of the Deaths Related to Hypothermy in Eskisehir between 1997 and 2016. J Forensic Res 8: 381. doi:10.4172/2157-7145.1000381
11. Kushimoto S, Gando S, Ogura H, et al. Complementary Role of Hypothermia Identification to the Quick Sequential Organ Failure Assessment Score in Predicting Patients With Sepsis at High Risk of Mortality: A Retrospective Analysis From a Multicenter, Observational Study. J Intensive Care Med. 2020 May;35(5):502-510. doi: 10.1177/0885066618761637. Epub 2018 Mar 15. PMID: 29544388.
12. Madea, B. (2014). Injuries due to Cold. *Handbook of Forensic Medicine*, 468–476. https://doi.org/10.1002/9781118570654.ch23
13. Sartini, & Ahimsa-Putra, H. S. (2017). *Redefining The Term of Dukun*. *29*(1), 46–60. http://sb.geoview.info/
14. Sauko, P., & Knight, B. (2016). *Accessing the E-book edition KNIGHT ' S FORENSIC PATHOLOGY*.
15. Søreide, K. (2014). Clinical and translational aspects of hypothermia in major trauma patients: From pathophysiology to prevention, prognosis and potential preservation. In *Injury* (Vol. 45, Issue 4, pp. 647–654). https://doi.org/10.1016/j.injury.2012.12.027
16. Tanghöj, G., Lindam, A., Liuba, P., Sjöberg, G., & Naumburg, E. (2020). Atrial septal defect in children: The incidence and risk factors for diagnosis. *Congenital Heart Disease*, *15*(5), 287–299. https://doi.org/10.32604/CHD.2020.011977
17. Wang, S. Y., Welch, T. D., Elfenbein, A., & Kaplan, A. V. (2018). Spontaneous Closure of a Secundum Atrial Septal Defect. *Methodist DeBakey Cardiovascular Journal*, *14*(1), 60–62. https://doi.org/10.14797/mdcj-14-1-60

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