SOAP Note and Clinical Management of Traumatic Hemothorax After a Motor Vehicle Accident

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SUBJECTIVE:

Chief complaint: the patient was involved in a motor vehicle accident. He is brought into the emergency clinic by good Samaritans who witnessed the accident.

History of Presenting Illness: the patient was headed to town in a public service vehicle when it crashed into an electric pole. The accident may have been due to poor visibility owing to the fog conditions. He was brought in with other patients by a group of good Samaritans and other first-aid providers who were within the area of the accident. The patient has bruises on his upper limbs and appears to have strained breathing, as evidenced by the rapid breathing rate. He complains of pain on the affected areas.

Past Medical History: no previous diseases, hospitalisations or blood transfusions and has no chronic illness

Surgery: the patient has not undergone any surgical procedure in the past

Allergies: none

Medications: none

Age/ health status: A 15-year-old male appears to be in a good state of health

Family history: the father has both hypertension and diabetes mellitus. His mother has recently been diagnosed with diabetes. They are both under therapeutic management for these conditions in a regional nursing care centre. The mother is also allergic to pollen and dust.

Social history: he is the only child in their family. He lives with his father and mother in their residential home. There are no smokers in the house. They do not keep any pets either.

Age/ health: A 15-year-old patient presents to the emergency clinic, having been involved in a road accident and having difficulty in breathing. He rates the pain at 7/10

Immunization: his vaccination history is up to date. At birth, he received the oral polio vaccine and the

combined diphtheria, pertussis and tetanus vaccine. He also received hepatitis B. oral polio and the combined DPT vaccine was repeated at 2, 4 and six months after that. The rotavirus vaccine was administered orally in the 2nd and 4th months. Measles, mumps, rubella, Hemophilus B, meningococcal and pneumococcal vaccines were given at 12 months.

Review of systems

General: denies irritability, weight gain or loss or any fever

HEENT: denies any ear pain or nasal congestion

Respiratory: the patient admits to having difficulty breathing and denies coughing, hemoptysis, wheezing or a history of asthma, bronchitis and pneumonia.

Integumentary: bruises on the upper limbs and chest region; rest of the skin appears normal, hair distribution is normal, no pustules, rashes or discolourations.

OBJECTIVE:

Height: 128cm Weight: 21Kg BMI: 24.8

Vital signs: T98F, P 84, RR 25 BP 122/76

General: alert, appears oriented to time and place, no acute distress

HEENT: normocephalic, no sinus tenderness, no exudates observed, no palpable nodes, no ear pain or obvious infections

Cardiovascular: S1 and S2 detected, no rubs, murmurs or clicks. Pulses for brachial, radial, femoral, popliteal and dorsalis pedis are 2+ and symmetrical.

Respiratory: asymmetrical respiratory movements, dyspnea, lungs are not clear to auscultation, dullness detected on the left chest on percussion, no rales, rhonchi or wheezes.

Integumentary; bruises on the upper limbs, no dryness, lesions, discolourations or rashes

ASSESSMENT:

The patient has sustained injuries to the upper limbs and the chest area. Due to the absence of fever and that temperatures are normal, there is little likelihood that the patient has acquired infections in the injured areas. The patient is bleeding lightly from the affected area. The patient may have fractures in the upper limbs and the chest, and this may be the cause of the observed asymmetry in

respiratory movements.

TESTS:

Carry out a chest X-ray scan to determine whether there is any fluid within the chest cavity and its location. This will also determine any possible fractures on the upper limbs.

Possible diagnoses:

Fractures of the upper limb and chest wall- this may be due to the impact resulting from the collision during the motor vehicle accident. This sudden impact may have exerted excess pressure on the humerus. It is essential to carry out an x-ray to rule out the presence of underlying fractures because this may be dangerous if ignored. Equally, the ribs may have been fractured. This condition is usually a deterrent on respiratory movements. This leads to uncoordinated movements during respiration (Trentz, 2014). Asymmetrical respiratory movements indicate an underlying deficiency in gaseous exchange within the alveoli. Oxygenation of tissues is thus affected.

Hemothorax- accumulation of blood in the pleural cavity (Mahoozi, Volmerig & Hecker, 2016). This space usually contains a small amount of pleural fluid. Accumulation of blood interferes with normal respiratory movements resulting in dyspnea and poor oxygenation of blood (Aboalsaud & Deckelbaum, 2015). This space can also be occupied by other fluids such as air, excess lymphatic fluid or pus. In all these scenarios, there is a limitation in the extent of respiratory movements.

PLAN:

Administer morphine sulphate bolus by an intramuscular route to reduce the pain. The dose for this is usually 10 mg/ml.

Administer diazepam 5mg/ml through the intramuscular route to sedate the patient. Place the patient on assisted ventilation to aid in respiration. After doing this, place the patient on local anaesthetic agents. Lidocaine is preferred at a dosage of 50 mg to achieve an effective local loss of sensation. A chest tube will be fixed to drain out any abnormal fluid within the pleural cavity.

Monitor the patient’s pulse, blood pressure, respiratory rate and oxygen saturation level to notice any changes in these parameters.

It is then proper to clean the wounds on the upper limbs and dress them to keep off any infectious agents.

The patient should be admitted to the wards for further check-ups. A chest specialist should see him. If the patient does not have any severe respiratory complications, they may be discharged after

removal of the chest tube.

References

Mahoozi, H.R., Volmerig, J., & Hecker, E. (2016). Modern Management of Traumatic Hemothorax. *J Trauma Treat, 5*(326), 2167-1222.

Aboalsaud, A., & Deckelbaum, D.L. (2015). Chest Trauma. In *Pocket Manual of General Thoracic Surgery* (pp.153-174). Springer, Cham.

Trentz, O. (2014). Polytrauma: pathophysiology, priorities and management. In General Trauma Care and Related Aspects (pp. 69-76). Springer, Berlin, Heidelberg.