**Heart Failure**

Name

Professor

Course

Date

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**Q1**: Patient presented with difficulties in breathing and progressive fatigue, she reports voiding urgency at night, and uses three pillows to sleep: on past medical history, she is overweight and known diabetic patient for twenty-three years on management with daily insulin and physical exercise, which involves twenty minutes walk for distance of a half-mile which she does one to two times weekly. She is a smoker, for forty years, smoking one pack of cigarettes per day. However, she doesn’t take alcohol.

On inspection, the patient was pale, dyspneic while speaking, and takes a rest to complete sentences and answer questions. The jugular vein is distended four millimeters above the sternal angle when the head of the bed elevated at forty five degrees. On further assessment, the patient had generalized edema and ascites. She has right ventricular heave while in semi fowler’s position. On palpation, radial pulse was plus one bilaterally. On auscultation: heart sounds S1, S2, and S3 are heard.

Vital signs pulse oximeter of 90% without oxygen and on oxygen two liters of oxygen via nasal cannula the pulse oximeter reads 93%; temperature of 97.3° F (36.3° C); heart rate, 88 beats/min. However the cardiac monitor reveals sinus arrhythmia including occasional premature ventricular contractions, then a respiration rate of 28breaths/min.

**Q2:** From the assessment, the patient had right-sided heart failure: this type of heart failure occurs when the right ventricle lose the ability to pump blood to the lungs, this leads to accumulation of blood in the veins and subsequent edema due to fluid accumulation and pressure thus fluid extravasate to surrounding tissues (InformedHealth.org, 2018). This leads to features of fluid accumulation such as jugular vein distension, edema, and ascites (Ioana, 2021).

**Q3**: Normal heart sounds that are S1, S2, and S3.These sounds are heard during the opening and closure of heart chambers (Liu, et.al, 2018). However, S3 is related to pathological dysfunction of the right ventricle. S3 is very rarely heard and uncommon, and it is associated with volume overload in the ventricles (Shono, et.al, 2019).

**Q4**: Additionally, the patient reported that she sleeps with three pillows while sleeping; this shows that patient has difficulties in breathing when lying flat, and therefore to ease the breathing difficulties associated with lying flat she uses the pillows for elevation (Stephanie, 2018).

**References**

Informed Health.org. (2018). Types of heart failure. https://www.ncbi.nlm.nih.gov/books/NBK481485/

 Ioana Dumitru. (2021). What are the clinical manifestations of predominant right-sided heart failure?. *Medscape*. <https://www.medscape.com/answers/163062-86228/what-are-the-clinical-manifestations-of-predominant-right-sided-heart-failure>

Liu, Q., Wu, X., & Ma, X. (2018). An automatic segmentation method for heart sounds. *Biomedical engineering online*, *17*(1), 106. https://doi.org/10.1186/s12938-018-0538-9

Shono, A., Mori, S., Yatomi, A., Kamio, T., Sakai, J., Soga, F., Tanaka, H., & Hirata, K. I. (2019). Ultimate Third Heart Sound. *Internal medicine (Tokyo, Japan)*, *58*(17), 2535–2538. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6761354/

[Stephanie Watson](https://www.healthline.com/authors/stephanie-watson) .(2018). Orthopnea. *Healthline*. https://www.healthline.com/health/orthopnea