Interventional Cardiology Journal
ISSN: 2471-8157

Open access Short Communication

Chest Drains are Surgical Drains Placed within the Pleural Space to Facilitate Removal of Unwanted Substances

Amarit Hubish*

Department of Cardiology, University of Lahore, Pakistan

INTRODUCTION

Surgical drains called chest drains are inserted into the pleural space to make it easier to get rid of unwanted substances like air, blood, or fluid.in order to maintain hemodynamic stability and respiratory functions. A water trap seal design is used in chest drains that do not have physical valves to prevent retrograde flow. These drains are often aided by continuous suction from a portable vacuum pump or wall suction. The foundation of chest drain management is the active maintenance of a negative intrapleural pressure through chest drains.

DESCRIPTION

A negative intrapleural pressure lets the lungs expand more easily, which improves alveolar ventilation and gas exchange. The first sub-atmospheric pressure device was the so-called central vacuum. A tubing system demonstrated that the entire hospital had access to this central vacuum. It was known as wall suction. Later, reduction valves that bring the negative pressure down to a range that is therapeutically acceptable were made commercially. This led to the development of multi-chamber suction, which makes use of three-chamber systems. The first pumps, the Emerson-Pump, were available in the 1960's. A fixed "negative pressure" was created by these and other systems that were launched later. The collection chamber of a siphon was too far back for these pumps to accommodate. A system that is controlled and driven electronically has been available since 2008, putting "negative pressure" on demand [1]. Two unique standards are utilized in chest seepage the board: the Bülau-Drain and Heber-Drain principles. The Heber principle, which employs hydrostatic pressure to transfer fluid from the chest to a collection canister, serves as the foundation for the "Heber-Drain". It uses passive suction all the time [2]. To function properly, the canister of the Heber drain must be positioned below chest level. Sub-atmospheric pressure is determined by the height difference between the floor and patient bed. A difference of, say, 70 centimeters in height results in a water pressure of minus 70 centimeters. A Heber-Drain is always used in conjunction with a water seal component. It is based on the principle. In 1875, Gotthard Bülau, a pulmonologist who lived from 1835 to 1900, used this method for the first time to treat pleural empyema. The majority of cardiac surgery uses this kind of drainage [3]. Mediastinal channels are put behind the sternum as well as close to the heart. In these instances, monitoring post-operative bleeding is the primary indication. Whether or not these drains are used with active suction depends on a variety of factors, including the physician's personal preference and experience, the particular patient, and so on. A one-chamber system is the simplest and most effective option for chest drainage. It consists of a single collection canister and either uses a Heber-drain or an active suction source [4]. A water seal is attached for active or passive air evacuation. When using a Heber-drain, manual assistance may be required to ensure that all air is sucked out.

CONCLUSION

When a patient is unable to breathe or cough out excess air, the height between the patient's bed and the ground may need to be adjusted to prevent a pneumothorax or subcutaneous emphysema. Some one-chamber systems are limited in their ability to treat large air leaks, particularly when the patient produces a lot of foam, due to the difficulty of detecting air leaks. A first collection canister is where air and fluid are directed in a two-chamber system. While air is directed into a second canister, gravity keeps the fluid in the first canister. A water seal can let air out either actively or passively. Patients with significant air leaks are typically treated with two-chamber systems. Due to protein-rich surfactant that may enter the tubing and be directed toward the patient, these patients frequently produce foam.

Received:	31-August-2022	**Manuscript No:**	IPIC-22-14795
Editor assigned:	02-September-2022	**PreQC No:**	IPIC-22-14795 (PQ)
Reviewed:	16-September-2022	**QC No:**	IPIC-22-14795
Revised:	21-September-2022	**Manuscript No:**	IPIC-22-14795 (R)
Published:	28-September-2022	**DOI:**	10.21767/2471-8157.8.9.45

Corresponding author Amarit Hubish, Department of Cardiology, University of Lahore, Pakistan, E-mail: hubish@gmail.com

Citation Hubish A (2022) Chest Drains are Surgical Drains Placed within the Pleural Space to Facilitate Removal of Unwanted Substances. Interv Cardiol J. 9:45.

Copyright © 2022 Hubish A. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

© Under License of Creative Commons Attribution 4.0 License
This article is available in: https://www.primescholars.com/interventional-cardiology.html

ACKNOWLEDGMENT

The author is grateful to the journal editor and the anonymous reviewers for their helpful comments and suggestions.

CONFLICT OF INTEREST

The author declared no potential conflicts of interest for the research, authorship, and/or publication of this article.

REFERENCES

1. Ashrafian H (2007) Anatomically specific clinical examination of the carotid arterial tree. Anat Sci Int 82(1): 16-23.
2. Manbachi A, Hoi Y, Wasserman BA, Lakatta EG, Steinman DA (2011) On the shape of the common carotid artery with implications for blood velocity profiles. Physiol Meas 32(12): 1885-97.
3. Solomon A, Caren G, Grotta, James C (2013) Clinical practice. Carotid stenosis. N Engl J Med 369(12): 1143-1150.
4. Sila CA, Higashida RT, Clagett GP (2008) Clinical decisions. Management of carotid stenosis. N Engl J Med 358(15): 1617-21.