Bidirectional IVC Filter

Tech ID: 29035 / UC Case 2014-422-0

SUMMARY

Researchers at UCLA from the Department of Radiology have developed an improved IVC filter with better filtering performance that is easily retrievable.

BACKGROUND

Pulmonary embolisms (PE) occur when a blood clot blocks an artery in the lungs and can lead to death when this happens to a major artery. Doctors implant inferior vena cava (IVC) filters when patients do not respond well to treatment with anti-coagulants. IVC filters are physical meshes that fit in the lumen of the inferior vena cava to block blood clots from entering the lungs. Typical IVC filters have limited ways to be implanted: either through the jugular vein in the neck or the femoral vein in the leg. Implanted filters have long term risks and need to be removed once the threat of PE is gone. However, they are hard to take out due to the amount of contact they make with the vessel wall.

INNOVATION

Researchers at UCLA from the Department of Radiology have developed an improved IVC filter with better filtering performance that is easily retrievable. Their filter is specially designed to have minimal contact with the vessel, which makes retrieval simple. Unlike other filters, this new design offers flexibility in that it can be implanted and retrieved from either the jugular or femoral veins. It also has a finer mesh that offers more protection than other filters. In the future, this design can also incorporate a drug eluting component for even better results.

APPLICATIONS

Filtering blood clots to prevent sudden blockage of major blood vessels

ADVANTAGES

- Easily retrievable, minimal contact with the blood vessel
- Both implantable and retrievable through the jugular and femoral vein
- Finer mesh for better clot protection
- Can incorporate a drug eluting design for better results

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,289,280	03/22/2016	2014-422

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Expandable Vascular Sheath

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OTHER INFORMATION

KEYWORDS

IVC filter, Heart, Cardiovascular, Pulmonary embolism, Coronary Embolism, Thrombosis, Inferior Vena Cava, Blood clot, Circulatory system, Femoral Vein, Jugular vein

CATEGORIZED AS

- **Biotechnology**
  - Health
- **Medical**
  - Disease: Cardiovascular and Circulatory System

RELATED CASES

2014-422-0

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