Claims

1. A system for anastomosis of a tubular structure, the system comprising:

   a device configured such that, when the device is arranged in the tubular structure, an anastomosis is obtained in the tubular structure and a cavity is formed between the device and the tubular structure; and

   a pump in fluid communication with the cavity and configured to temporarily apply a negative pressure to the cavity.

2. The system of claim 1, wherein the pump is configured to apply the negative pressure to the cavity periodically.

3. The system of claim 2, wherein the period at which the pump is configured to apply the negative pressure to the cavity is inversely proportional to the heart rate of a patient having the tubular structure.

4. The system of claim 2 or 3, wherein the period at which the pump is configured to apply the negative pressure to the cavity is an integer multiple of the time between consecutive heartbeats of a patient having the tubular structure.

5. The system of any preceding claim, wherein the magnitude of the negative pressure is lower than the magnitude of the diastolic pressure of a patient having the tubular structure.

6. The system of any preceding claim, wherein the pump is a vacuum pump.

7. The system of any preceding claim, further comprising at least one catheter in fluid communication with the cavity at a first end, and in fluid communication with the pump at a second end.

8. The system of claim 7, wherein the at least one catheter comprises at least two catheters.

9. The system of claim 8, wherein a first catheter of the at least two catheters is configured as an inlet to the cavity for a contrast medium, and a second catheter of the at least two catheters is configured as an outlet from the cavity for the contrast medium.

10. The system of claim 8 or 9, wherein the at least two catheters comprise four catheters.

11. The system of any preceding claim, further comprising a pressure sensor configured to measure the pressure in the cavity.

12. The system of claim 11, wherein the pressure sensor is integrated with the pump.

13. The system of any preceding claim, further comprising an absorbent element disposed between the pump and the cavity.

14. The system of any preceding claim, wherein the tubular structure comprises a first part and a second part, and the device is configured such that, when the device is arranged in the tubular structure:

the anastomosis is obtained at a contact area between the first part of the tubular structure and the second part of the tubular structure; and

the cavity is formed between the device, the first part of the tubular structure and the second part of the tubular structure.