Advancements in Intracoronary Stents

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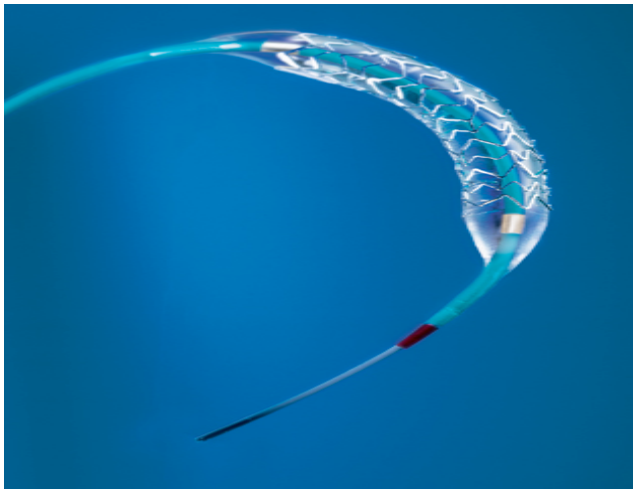
***Abstract*—The invention of the stent has saved many lives, but as with all artificial implants, there are some problems with them, and improvements that can be made.**

I. Introduction

THE stent has been used in many applications since its invention, but one has of the most major current uses is the intra coronary stent, which was first succesfully used in 1986. The stent has progressed from its inception to achieve greater success rates, and be able to be effective for greater periods of time.

II. Methods

The intracoronary stent is now deployed using catheters. generally the stent is deployed through a small incision to the femoral artery. The stent is deployed along the guide wire through the leg, and positioned in the heart using fluoroscopy. After the stent is in position it is expanded using a balloon on the end of the catheter. The catheter is then removed from the incision.



III. Results

The stent is invaluable in keeping blood vessels in the heart from collapsing, and in keeping the them clear of plaque for an extended period of time after the procedure. Stent technology has also allowed for the deployement of stents within both veins and arteries now, though their designs are very different due to their differences in demands.

IV. Discussion

The development of the stent has gone from a non collapsible stent to a collapsible stent to the medicated stent. The collapsible stent allowed for easy insertion and less complications due to damage of the surrounding vessels, and allowed for their implementation in intracoronary procedures. Problems with the collapsible stent were in medication problems and plaque buildup within the stented area. The medicated stent was developed in order to deal with many of the complications that arose from the non medicated stent. The medicated stet, also known as a drug eluding stent is coated with blood thinners and anti coagulants so that there are less complications from the stent while the stent is still exposed to bloodstream. The stent is eventually absorbed into the cell wall lining where it is placed, which means that it is no longer an area for plaque to buildup.

References

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