Approved: June 1996
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I. INTRODUCTION AND DEFINITION

Permanent indwelling endoprostheses were developed because of the drawbacks of internal/external biliary catheters such as the need for regular catheter flushing and dressing, possible bile leakage, infection and pain at the catheter entry site. The first generation of biliary endoprostheses were polymers and, later, metal stents were developed. Both have been installed percutaneously and endoscopically.

The indwelling "polymer" endoprostheses have not achieved general acceptance in clinical practice mainly because of problems with migration and premature blockage. They are therefore limited to a patient with a short life expectancy or where an external biliary catheter could not be tolerated.

Metal endoprostheses (balloon or self-expandable) were initially designed for intravascular applications but were soon adapted to endobiliary lesions.

II. QUALIFICATIONS

As for biliary drainage.

III. INDICATIONS AND CONTRAINDICATIONS

A. Indications

1. Malignant strictures (primary, secondary, extrinsic compression).
2. Benign strictures, especially recurrent, in the patient not suitable for surgery.

The indications have to weighed against the life expectancy of the patient.

B. Contraindications

1. Single step insertion:
   Bleeding diathesis
   Previous life-threatening reaction to contrast medium
   Ascites

2. Once a biliary drainage has been carried out and no infection is present, there are no contraindications to installing an endobiliary prosthesis.

IV. EXAMINATION TECHNIQUE, PERFORMANCE AND RELATED MATTERS
A. Approach and method of stent deployment

Most biliary endoprostheses are installed as a 2-step procedure following biliary drainage. This applies to the 12 French polymer stents, the Palmaz and the Gianturco metallic stents. The Wallstent expandable metal prosthesis permits a single-step insertion.

Polymer indwelling permanent endoprostheses are placed over a guidewire, usually through a peelaway sheath.

The metallic balloon or self-expanding stents have different modes of deployment depending upon the property of the stent and the manufacturer’s specifications.

In the case of a long obstruction, several overlapping stents may be required.

B. Complications

Complications specifically related to the stent are:

1. Malposition
2. Migration
3. Blockage

All of these complications should be recognized early for prompt correction.

REFERENCES


