Actualities in colic replacement of the esophagus – PhD thesis

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Abstract

Introduction

Even if gastric tubulisation has received wide acceptance by most teams involved in esophageal surgery, the use of the colon as an esophageal substitute plays a key role in the field of esophageal reconstruction, especially, when the stomach is no more available. Hence, coloplasty may be the only option in various situations: when a previous gastric surgery precludes the use of the stomach, when a total gastrectomy is required in combination with the esophagectomy, or as a salvage procedure when a previous gastroplasty failed. Besides these 'by default' indications, coloplasty keeps elective indications in those situations typified by the young age of the patient and the need for esophagectomy for a benign disorder. Indeed, the preservation of the stomach as a pouch is an important aspect to be considered as far as quality of life is concerned. In the spectrum of cancer operations, colon interposition is also used selectively for reconstruction of the alimentary tract after the resection of tumours located at the vicinity of the pharynx because of transplant length. Nowadays, 'by-pass' esophagocoloplasty has become a very uncommon operation performed in highly selected patients.

Methods

Esophageal reconstruction with colon transplant has been carried out in 392 patients during 1970 to 2003. The pathological conditions demanding esophagocoloplasty in this series are: corrosive esophageal stenosis post lye ingestion (73%), malignancy (19%), repeat esophagoplasty for failed previous transplants (5%) and other benign rare cases (3%). All kind of colic grafts described in the literature were used to

replace the esophagus; left colic interposition with blood suply provided by the left colic artery was the most used in the begining of the series, in the end, the preffered one beeing the ileocecal graft due to the presence of ileocecal valve with strong antireflux function. As a result of practical experience a new concept was born, named „balanced operation”, against the use of a sigle procedure, which is the dominant attitude nowadays. Some particular techniques originating from the fundamental procedures deserve to be commented on. Concerning the length of the transplant, the superlong colic graft (33 patients) is a procedure used particularly in the strictures of the pharynx, pedicled on the left colic artery and incorporating the transverse and ascending colon and the terminal ileum. In 35 patients, from the second half of the series, an original procedure has been performed, based on a continuous colic loop, either in iso or antiperistaltic manner, that is anastomosed distally side-to-side to the stomach and associated with a constrictive ligation of the colon immediately below the anastomosis, like in Tomoda-Rosanov procedure. This is a simple and safe procedure, which does not implicate a septic stage caused by colic transection and lessens the risk of necrosis of the graft in elderly or poor risk patientswith precarious blood suply. Derived from the ileocecoplasty, the pure ileoesophagoplasty pedicled on the ileocolic artery can be an extremely usefull procedure when the stomach or the colon are not available. The colic transplant was situated substernally in the majority of patients , less frequently antethoracic or by the posterior mediastinum.

Results

With a mortality of 4.33%, early morbidity 37.24% and a late morbidity of 46.15%, the studied series has better results than the average of literature published larger series. Mortality and morbidity are significantlly corelated whith the underlying pathology and the patients age. The results can be considered good in 69% of the patients, satisfactory in 23% and bad in 8%. As the minimally invasive procedures

of esophageal resection and reconstruction are clearly codified nowadays and the use of data bases and treatement protocols are well established we hope in a amelioration of the results in the future series of patients with this pathology.

Conclusions

The colic replacement of the esophagus is a demanding procedure and good results are obtained by the hand of experienced surgeons operating in high volume hospitals.

As the malignancies are the predominant pathology nowadays, the palliation of dysphagia can be obtained by minimal morbidity procedures and minimally invasive esophagectomy is a well codified method, the by-pass techniques are rarely used in highly selected patients.

We recommand the minimally invasive approach whenever possible.

The colic transplants offer a large possibility of options of reconstruction; „the balanced operation concept" offers to the operating surgeon the possibility of chossing the ideal colic segment, beeing against the use of a single procedure.

The isoperistaltic orientation of the colic graft and the posterios mediastinal route are to be used whenever possible.

The suitable preoperative investigations, correct surgical indication, well performed surgery and impecable postoperative management are the means to obtain good results.

Repeat esophagoplasty is a formidable surgical intervention associated with high morbidity and mortality; it isn't a standardised procedure, beeing directly dependent on the previouses surgeries, each patient beeing, we can say, unique.