THE METHOD OF TREATMENT OF COMMINUTED FRACTURES OF BONES OF THE ZYGOMATICO-ORBITAL COMPLEX

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The authors described the results of treatment of comminuted fractures of zygomatico-orbital complex by 30 patients. They used special U-styled metallic plates for fixation of bone fragments. For prevention of defects of soft tissues in temporal region were used "alloplants" of heel derma. All patients have good cosmetic and functional results.

ALLOPLANT IN ESOPHAGUS SURGERY

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ABSTRACT

In esophagus surgery, there is often the necessity of using various plastic materials such as autotransplants, modified biological materials and synthetic materials. Although the results are good, they are not devoid of problems and in some cases there is intolerance to the material, complicating even more the disorder that was trying to resolve. In this work we present the experience with 10 esophagus surgeries using Alloplant, a biological material of human origin composed of collagen and collagen-proteoglycan complexes, which has the characteristic of very poor immunogenicity and proteoglycans-controlled reabsorption that led to an adequate substitution by the patient's own tissue, achieving excellent results.

Alloplant, material biologico de origen humano, constituido por colagena complejos colagena' proteoglicanos que tiene como caracteristicas en ser muy pobremente inmunogenico su reabsorcion controlada por los proteoglicanos permite una adecuada sustitucion por tejido propio, lograndose una excelente reparacion.

INTRODUCTION

In esophagus surgery the surgeons are often encountered with the necessity of using various plastic materials. However, according to the literature on the subject various techniques for autoplasty and Alloplant plastic surgery available nowadays are not commonly used in practice due to their grave drawbacks. Consequently, development of new plastic materials and new surgical techniques are of high priority today.

This article is intended to share the experience gained when using an allotransplant in esophagus surgery. The allotransplant used is one of the series of Alloplant developed by the Russian Eye and Plastic Surgery Center. Alloplant is a biological material on the basis of collagen and collagen-pro-
teoglycane complexes, taken from human or animal tissues.

Alloplant has the following characteristics:

- Low antigenic properties;
- Alloplant is being replaced with a recipient’s own tissue (regenerator). The properties of a regenerator can be controlled by the properties of Alloplant.
- 52 types of Alloplant developed and manufactured in the Center allow to perform the most of well-known and.

a lot of new plastic and reconstructive operations on various human organs. In esophagus reconstructive surgery the authors used Alloplant for volume defects.

The Alloplant was used in 10 planned operations on esophagus. The reason to use Alloplant was a large muscular defect on the esophagus wall after removal of large diverticular and esophagocardiomyotomy with cardiospasm after removal of submucous benign tumor in esophagus. Alloplant was also used with a limited cicatricial structure in the thoracic part of esophagus to substitute the cicatrical wall of esophagus.

Extramucous esophagocardiomyotomy using Alloplant was performed in three patients. The operation technique is as follows: first upper median laparotomy is performed, then the wound is enlarged with the Sigal retractor. Once the abdominal part of the esophagus and the cardial part of the stomach are separated, the muscular layer is dissected along the anteroleft wall upto the mucous membrane; the cut length is 6-8 cm. Then mucous is carefully separated along 2/3 of the esophagus circumference. According to the size of the defect on the muscular wall an Alloplant patch of a semi-oval form of 2-3 mm depth is modelled and a more rounded part of it is directed to the cardial part of the stomach and fixed to the muscular defect edges with interrupted sutures with intervals of 4-5 mm (Fig. 1). The advantages of this technique are as follows: simplicity, avoidance of anatomic deformity and necessity in autoplasty.

After diverticulectomy of esophagus in 3 patients was used Alloplant. When examining one of the patients with large diverticulum in the cervical part of the esophagus was found a wall muscular defect of 4+2 cm in size, which could be covered only with plastic materials. According to the size of the defect an Alloplant patch was modelled and fixed to the defect edges with interrupted sutures (Fig. 2). With such diverticulum position the technique of Alloplant plastic surgery is of great value, as the autoplasty technique with diverticulum in the cervical part is too complex. In two patients large pulsatile diverticulums were found in the thoracal part of the esophagus. After diverticulum ectomy Alloplant was used according to the abovementioned technique. The same technique was followed in operations performed in two patients with leiomyoma in esophagus.

In two patients with limited cicatricial structures in the lower third of esophagus Alloplant plastic surgery was performed with the following technique: esophagus is expressed from the left lateral thoracic access and longitudinal myotomy is performed in the region of the cicatricial structure, the cicatricial muscular wall is dissected and the mucous membrane is set free along its circumference. The Mucous membrane is dissected and sutured cross-shaped (Figs. 3, 4). This allows to widen esophagus lumen and avoid rupture of the sutured mucous membrane caused by overextension. So the muscular defect of the esophagus wall was replaced with Alloplant according to our technique.

There were no complications in post-operative periods in all abovementioned operations. Endoscopic examination showed no pathologic changes in the mucous membrane in a place of
operation. X-ray examination observed no permeability disturbance. No cicatricial deformations were observed in Alloplant plastic surgery as post-effects.

Alloplant was used in 5 patients with traumatic rupture of esophagus and its biological properties proved to be excellent. Emergency operations were performed in those five patients: one line interrupted suture was put on the rupture in esophagus wall, after that

Alloplant was fixed with the interrupted suture with the help of a noninjuring needle in an area of the intact part of the esophagus. All the operations were performed without complications. All the patients were discharged being recovered.

Consequently, application of Alloplant in esophagus surgery is justified from the anatomy point of view, Alloplant facilitates the surgery techniques and helps to rehabilitate the integrity of the esophagus wall.

Application of Alloplant when suturing rupture in esophagus permits to strengthen sutures in esophagus and protect them of infection.

REFERENCES


PROPHYLAXIS AND TREATMENT METHODS OF BRONCHIAL FISTULAS AFTER LUNGS SURGERY

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According to the literature on the subject (1,2,3) bronchial fistulas are the most serious complications after the lungs surgery. Frequency of bronchial fistulas development ranges from 2 to 30%, and no tendency for a decrease of these complications is noted. In this report we represent our experience in prophylaxis and treatment of bronchial fistulas.

476 patients suffering from lungs suppurative diseases were operated in the Thoracic Surgery Department of City Clinical Hospital No. 6 (Hospital Surgery Clinic, Bashkir Medical Institute) in the period since 1979 up to date. In 32 patients (6,7%) developed bronchial fistulas in the post-operative period. While analysing the reasons of bronchial fistulas development we established that in 18 cases there was the active infecting of the pleural cavity caused by dissecting pleural adhesions and cutting parietal abscesses while separating lung; marked inflammatory infiltration in bronchus - 4 cases; inflammation exacerbation in another lung - 2 cases.

Technical errors during the operation (long stump of bronchus, injury of the remained part of lung tissues, defects in plasty of bronchus stump) caused development of bronchial fistulas in 7 patients. In one patient the reason was not revealed. First the treatment of the bronchial fis-