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FALSE ANEURYSM OF THE DISTAL ANASTOMOSIS AS A CAUSE OF RECURRENT RECONSTRUCTIONS OF THE AORTO-FEMORAL SEGMENT

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We observed 78 patients with false aneurysms of the distal anastomosis after previous reconstructive surgery in aorto-femoral segment. Of the 78 operated patients good immediate result was noted in 65 patients (83.3%), amputation was carried out in 9 (11.5%) cases. Postoperative lethality was 5.1% (4 patients).

Keywords: false aneurysm, recurrent reconstruction

Под наблюдением находилось 78 больных с ложными аневризмами дистального анастомоза после ранее перенесенных реконструктивных операций в аорто-бедренном сегменте. Из 78 оперированных больных хороший непосредственный результат отмечен у 65 пациентов (83,3 %), ампутация конечности произведена у 9 (11,5%). Послеоперационная летальность составила 5,1% (4 больных).

Ключевые слова: ложная аневризма, повторные реконструкции

The false aneurysm of the anastomosis is a specific complication of reconstructive angiosurgery. Its frequency ranges from 4.4 to 13.5% [2-6]. The main reasons for formation of false aneurysm are: degenerative-dystrophic changes in the vessel wall with loss of its elastic properties, significant thinning of the vessel wall during endarterectomy with removal of internal and muscle membranes, hypertension, wound infection, poor hemostasis and hematoma in the wound, injury, etc. [1,3]. If this serious complication is detected, questions of surgical tactics and techniques of reconstructive surgery on blood vessels will require further research.

1,796 operations of reconstructive surgery for atherosclerotic occlusion of blood vessels of aorto-iliac-femoral segment have been carried out from 1984 to 2010. False aneurysm of the distal anastomosis formed in 78 (4.3%) patients. Terms of aneurysm are from 1 month to 8 years after surgery.

The causes of false aneurysm were defective angiography — in 16 patients (20.5%), endarterectomy with excessive removal of the inner and middle layers of artery — in 18 (23.1%), the occurrence of infection — 7 (9.0%), hypertension — 11 (14.1%), early physical activity — 7 (9.0%), high peripheral resistance due to failure of the distal bloodstream in 14 (17.9%) patients. In 5 (6.4%) patients the cause of the false aneurysm could not be established.

Clinical sign of false aneurysm of the distal anastomosis was pulsating tumor formation in the groin area with a diameter of 2 to 6 cm. 57 patients had systolic murmur revealed by auscultation of this area, 4 patients with associated infection of the prosthesis — hyperemia over aneurysm, leukocytosis, left shift in leukogram, increased erythrocyte sedimentation rate, mild anemia, 3 patients had pinhole fistula with serous purulent discharge. There were no difficulties in diagnosis of this complication, angiography has not been performed.

Characteristic clinical features of false aneurysms are progressing, the tendency to thrombosis, rupture of the wall and bleeding. We consider detection of false aneurysm is indication for reconstructive surgery. Type of

surgery depends on the location of the aneurysm, infection of prosthesis.

In patients with false aneurysm of the distal anastomosis with no signs of infection the operation has begun with the selection of vessels above and below it, opening of the aneurismal sac, removing of thrombotic mass, tissue detritus, fibrous layers and assessment of the central and retrograde blood flow; the wall of the aneurismal sac was excised and endarterectomy was performed from the entrance and throughout deep and superficial femoral arteries. In case of enough central blood flow reconstruction of the distal anastomosis old branches, autovein or new branches (53 patients) have been used. In 7 patients after resection of the aneurysm the original method of prosthetics has been proposed: bifurcation prosthesis of small-diameter has been used to replace the defect of the vessel (14:7:7 mm), its proximal branches anastomose with the site of the old branches and bifurcation branches — with superficial and deep femoral arteries.

In 18 patients because of insufficient blood flow due to stenotic or occlusive lesions of the proximal vessels an additional bypass was performed besides resection of aneurysms, particularly cross femoral-femoral — in 3 cases, iliac-femoral — in 11 cases, line aorto-femoral — in 4 patients.

In 7 patients with infected false aneurysm operation has begun with its opening, then separating of branches and its resection within the uninfected tissue. In 4 patients the operation has finished with stitching of the defect or ligation of the artery, extraanatomical bypass through the obturator foramen has been performed in 3 patients.

Of the 78 operated patients good immediate result was noted in 65 patients (83.3%), amputation was carried out in 9 (11.5%) cases. Postoperative lethality was 5.1% (4 patients).

Some patients demonstrated predisposition to the formation of false aneurysm; when there was no infection aneurysm formed simultaneously in both inguinal areas or consecutively (after the recurrent reconstructive surgery). 1 patient has undergone 4 operations for false aneurysm of the distal anastomosis during 6 years after aortobifemoral bypass. We believe that this patient along with the existing predisposing factors for the formation of aneurysm had reaction of rejection of synthetic prosthesis as a foreign body.

Conclusions

1. Surgical approach should be active in case of false aneurysm of the distal anastomosis after reconstructive surgery for Leriche syndrome.

2. In the absence of prosthesis infection in patients with false aneurysm of the distal anastomosis resection of aneurysm with reconstruction of the distal anastomosis should be performed.

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