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SHORT REPORT

Trans-osseous Aorto- and Ilio-femoral Bypass in Case of a Hostile Groin

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Introduction

Trans-osseous aorto- or ilio-femoral bypass grafting is an alternative technique to solve complicated vascular problems in the groin. Many surgeons are not familiar with this operation, which is the reason for presenting our two cases.

Case 1

A 45-year-old man underwent lymph node dissection of the right groin because of a squamous cell carcinoma, followed by radiation therapy. Two months post-operatively he had a bleed from ulceration in the groin. Conservative treatment failed and the ulcer was excised, the external iliac and common femoral vein had to be ligated and a defect in the common femoral artery was repaired. The vessels were covered with a rectus abdominus flap.

After several weeks the patient suffered heavy further bleeding and an emergency operation was necessary. Via an extraperitoneal approach the right external iliac artery was ligated and the bleeding controlled. An anatomic repair or obturator bypass was impossible as a result of wounds and radiation therapy. An 8 mm drill hole was made anteriorly in the ala of the iliac bone. The deep femoral artery was dissected by an incision lateral to the sartorius muscle and a tunnel was made posterior to the rectus femoris and through an opening in the vastus lateralis and the tensor fascia latae, up to the drill hole. The

contralateral saphenous vein was harvested and sutured in a reversed position end to side to the common iliac artery. The bypass was then passed over the iliacus down through the drill hole. A small incision was made distally to the anterior superior iliac spine to facilitate pull through of the bypass. Finally the bypass was anastomosed to the deep femoral artery (Fig. 1). During two year follow-up the bypass remained patent and the limb preserved after which the patient was lost to follow-up.

Case 2

A 79-year-old female presented with an abscess in the right groin as a result of an infected femoro-femoral crossover bypass from left to right which was constructed because of radiation induced occlusion of the right common and external iliac artery. She had a history of radiotherapy because of carcinoma of the cervix 13 years previously, left nephrectomy and a Hartmann procedure because of radiation induced stenosis of the ureter and sigmoid colon respectively. The cross-over bypass was removed, without any further reconstruction. Postoperatively the perfusion of the limb seemed acceptable. However, after several days the circulation deteriorated and arterial reconstruction was indicated. The operative technique was the same as in the first case, although the size of the drill hole was 10 mm and the proximal anastomosis was at the level of the aorta. Postoperatively she had a well-functioning bypass as confirmed by duplex scanning and preservation of the limb. Six months later she developed an ileus which was treated conservatively. During this period the bypass occluded.

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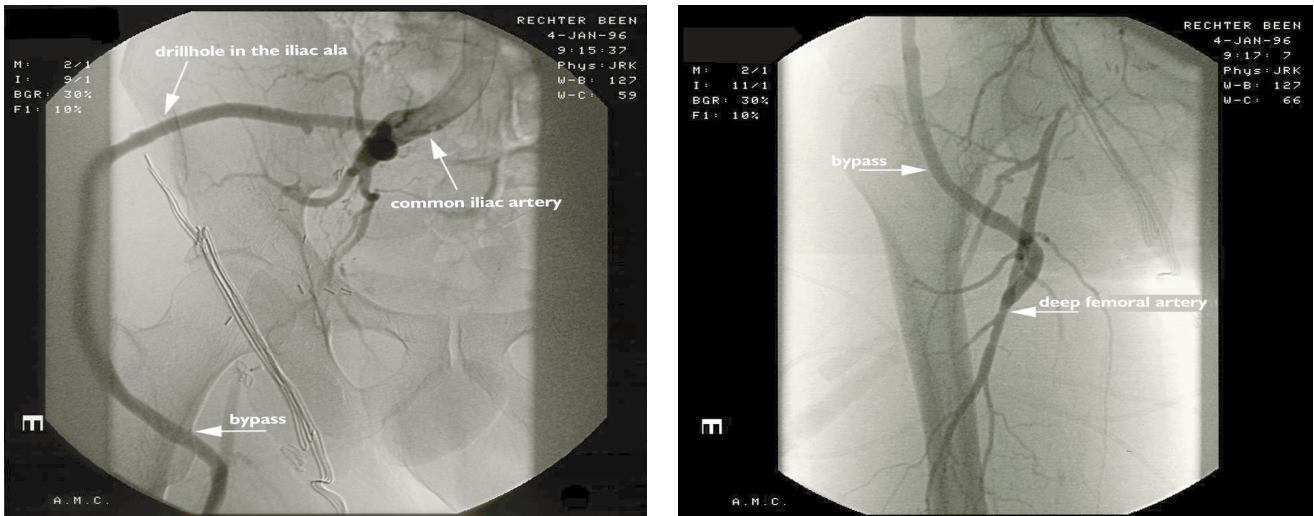


Fig. 1. Postoperative angiography of the ilio-femoral bypass in patient 1.

She refused amputation and died two weeks after occlusion of the bypass.

Comment

The trans-osseous aorto- or iliofemoral bypass is an attractive extra-anatomic route in case of a hostile groin and was first described by Favre *et al.*¹ The

technique is easy and the operative route far away from an eventually infected wound in the groin.

Reference

- 1 FAVRE JP, GOURNIER JP, BARRAL X. Trans-osseous ilio-femoral by-pass. A new extra-anatomical by-pass. *J Cardiovasc Surg* 1993; 34: 455-459.