

MANAGEMENT OF INFECTED DACRON GRAFT

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The dacron graft is the most commonly used and suitable arterial substitute today! Dacron graft infection due to pseudomonas is rare. The offending organism is usually Staphylococcus Epidermis initially. However, it is later compounded by the addition of pseudomonas or Klebsiella organisms. (3)

The complication of vascular graft infection is associated with high mortality and morbidity. Loss of the extremity is one of the disastrous results. The infected graft becomes a foreign body with perigraft abscess formation. (2) When the anastomosis is involved, bleeding due to leakage or rapid exsanguination due to disruption of the anastomosis may occur. In the presence of uncontrolled infection the dacron graft becomes weak and blood periodically oozes through the interstitium. (2)

Direct surgical repair of the anastomosis is usually doomed to failure. The tissues are friable and disintegrate when repair is attempted. Actual ligation of the artery is then needed to produce hemostasis. Another bypass becomes imminent, though risking infection in order to save the extremity. In our experience the management of these patients is divided into three categories as discussed below.

CATEGORY I

Sterilization of the Implanted Dacron Graft In Vivo and Skin Graft.

Case No. 1, W.S.

This 56 year old male entered the hospital with impending gangrene of the right foot. He had femoral dacron bypasses three times previously. This time the right common iliac artery was totally occluded. He had a history of

myocardial infarction with cardiogenic shock and cardiac arrest.

Femoro-femoral artery crossover graft was inserted under epidural anesthesia. Post operatively the right leg was well perfused. However, the right groin incision did not heal at the upper end. The dacron graft became exposed and infected.

Case No. 2, G.F.

A 62 year old female who had claudication and rest pain in the left leg showed a total occlusion of left iliac artery. A femoro-femoral artery crossover graft was inserted. Post operatively the patient did well and was discharged.

A few weeks later a discharge began at the upper end of the groin wound. Subsequently, the wound partially disrupted.

The management of these patients consisted of massive antibiotics given intravenously (Keflin, Gentamycin). The wounds were irrigated daily with an antibiotic solution as well. The use of an aseptic syringe or sterilized water pick irrigator was encouraged. It was continued until the culture from the wound was free of micro-organism on two consecutive occasions. The infected dacron graft was converted to an exposed dacron graft. Rotation skin grafting technique was used to cover the dacron graft. Split thickness graft was used below it. Both patients recovered and have been asymptomatic for several months.

CATEGORY II

New Bypass New Tunnel Procedure: When local sterilization technique fails or a complication such as bleeding occurs, a new bypass in a new tunnel is created. The infected

dacron graft is removed.

Case No. 3, V.H.

A femoro-femoral artery crossover graft was inserted in another institution. Several months later the right groin wound became massively infected. The dacron graft was exposed. Response to medication and local treatment was poor. Periodic bleeding was noted from the dacron graft. Right axillary-popliteal artery dacron bypass was successfully done to perfuse the extremity. The fem-fem. artery crossover graft was ligated and subsequently removed.

Case No. 4, G.A.

A fem-fem. artery crossover graft was inserted under local anesthesia. Post operatively the patient did well and was discharged. A few weeks later he was admitted with an infected right groin wound and active hemorrhage from the anastomosis. This necessitated ligation of the femoral artery above the anastomosis. A Right external iliac-popliteal artery bypass saphenous vein graft was done with gratifying results.

Case No. 5, J.D.

This 56 year old female had end stage kidney disease. A Thomas shunt was inserted in the right groin for hemodialysis. It was used for several months. The shunt clotted on several occasions and was subsequently removed. The superficial femoral artery and vein were repaired utilizing the end teflon fabric of the shunt. Several weeks later the groin wound became infected and bled. The superficial femoral artery was ligated to control the hemorrhage. External iliac-popliteal artery dacron bypass was successfully carried out. Several months later the mid-segment of the dacron graft became infected. Local care and antibiotic treatment failed. A new dacron bypass in a new tunnel was inserted. The infected part plus a good portion of the clean section of the dacron graft was removed. The procedure was successful.

All patients despite draining sinuses, perigraft abscess and positive growth on culture medium remained afebrile with normal leucocyte count.

CATEGORY III

Case No. 6, A.B.

This obese patient received a fem-pop dacron bypass. After several weeks the groin wound

became infected. This required drainage and wound packing. The wound closed spontaneously.

SUMMARY

The most unwanted and unfortunate complication of bypass surgery is infection of the dacron graft. It carries a high mortality and morbidity. In our experience the management of these patients is divided into three categories.

1. Local irrigation and sterilization of the dacron graft in situ and rotation skin graft.

2. New bypass new tunnel with excision of the infected dacron graft.

3. Local care and spontaneous closure of the wound.

NOTES

1. Bangash, M., M.D. Symptomatic Aneurysm of the Abdominal Aorta. Successful Surgery in Elderly Patients, One with a Massive Aneurysm. *Vascular Surgery*, Vol. 9, No. 1, February 1975.

2. Lindenauer, S. Martin, M.D. Surgical Treatment of Infected Grafts.

3. Rich, Norman, M.D., et al. Infected Grafts: Clinical Presentation and Diagnosis.

TREATMENT

Exposed Dacron Grafts

(About 1% Incidence) Total = Six

Local Irrigation & Sterilization in

Vivo and Rotation Skin Graft = Two

Local Irrigation and New Bypass

Graft and New Tunnel = Three

Local Irrigation and Spontaneous

Closure of Wound = One

All Patients Received Systemic
Antibiotics

ANTIBIOTICS COCKTAIL FOR
IRRIGATION
"BUG JUICE"

Normal Saline	100 ml
Neomycin Sulphate	250 mg
Bacitracin	25,000 units
Polymyxin	250,000 units