

CHRONIC DISCHARGING SINUS FOLLOWING AORTO-FEMORAL BYPASS GRAFT SURGERY: A DELAYED PRESENTATION OF PROSTHETIC GRAFT INFECTION

Cardiovascular Surgery

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ABSTRACT

A 52-year-old male presented with a chronic non-healing discharging sinus in the right groin persisting for six years following bilateral aorto-femoral bypass surgery. The patient had undergone vascular reconstruction at a private hospital and subsequently developed persistent purulent discharge from the right groin incision site three years after surgery. He also underwent infraumbilical hernia repair with preperitoneal mesh placement two years later. Computed tomography and vascular imaging demonstrated chronic occlusion of the left aorto-femoral graft with collateral reformation and preserved distal arterial flow. The case highlights the importance of long-term surveillance after vascular graft surgery and the diagnostic challenges associated with chronic graft infections.

KEYWORDS

Aorto-femoral bypass, graft infection, chronic discharging sinus, vascular surgery, collateral circulation

INTRODUCTION

Prosthetic vascular graft infections are uncommon but potentially serious complications following aorto-femoral bypass surgery. Presentations may vary from acute sepsis to delayed chronic discharging sinuses occurring years after the initial procedure. Chronic low-grade infections may remain localized and present primarily with persistent sinus formation, making diagnosis and management challenging. [1-4]

CASE PRESENTATION

A 52-year-old male presented with complaints of a non-healing wound in the right groin associated with intermittent pus discharge for six years. The patient was asymptomatic prior to undergoing bilateral aorto-femoral bypass surgery at a private hospital in Bhavnagar six years earlier. Three years after surgery, he developed a discharging sinus from the right groin incision site.

Two years prior to presentation, the patient also developed an infraumbilical hernia for which he underwent preperitoneal mesh repair. Due to persistence of the groin sinus, further evaluation was performed with contrast-enhanced CT imaging and vascular Doppler assessment.

INVESTIGATIONS

Radiological evaluation demonstrated complete chronic occlusion of the left aorto-femoral graft with collateral vessel formation. Distal arterial opacification and normal-caliber distal vessels were maintained through collateral circulation. The right-sided arterial system showed preserved flow with mild atherosclerotic changes.

Key radiological findings included:

- Left aorto-femoral graft: completely occluded
- Native common iliac artery: chronic occlusion
- Collateral circulation maintaining distal perfusion
- Patent distal tibial and dorsalis pedis arteries
- Multiple abdominal wall and retroperitoneal collaterals

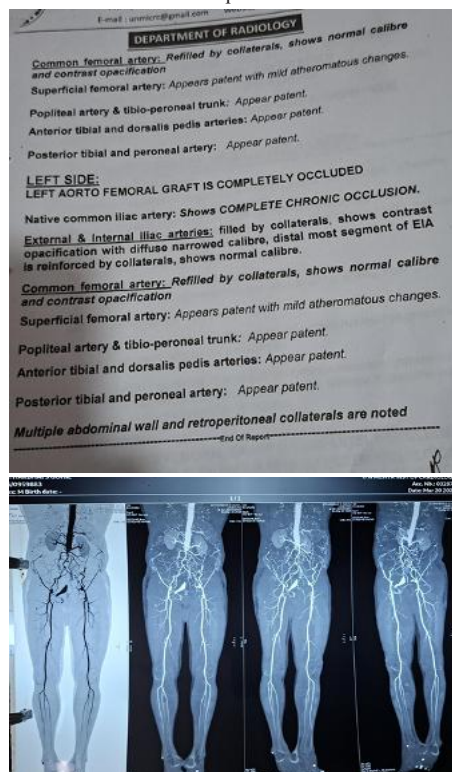
DISCUSSION

Late graft infections after aorto-femoral bypass surgery can present with chronic sinus formation, groin sepsis, pseudoaneurysm formation, or systemic infection. [5-7] Chronic graft infections are frequently associated with biofilm-forming organisms and may remain indolent for prolonged periods. [2] Imaging studies including CT angiography play a crucial role in evaluating graft integrity, occlusion, surrounding collections, and collateral circulation. [1,7,8]

Management strategies depend on the severity of infection, graft involvement, distal perfusion, and patient comorbidities. Treatment options may include long-term antibiotics, graft excision, extra-anatomic bypass, or staged vascular reconstruction.

CONCLUSION

This case demonstrates a delayed presentation of chronic groin sinus following aorto-femoral bypass grafting. Persistent groin discharge after vascular reconstruction should raise suspicion for prosthetic graft infection or graft-related complications. Early recognition and appropriate imaging are essential for optimal management and prevention of severe vascular complications.



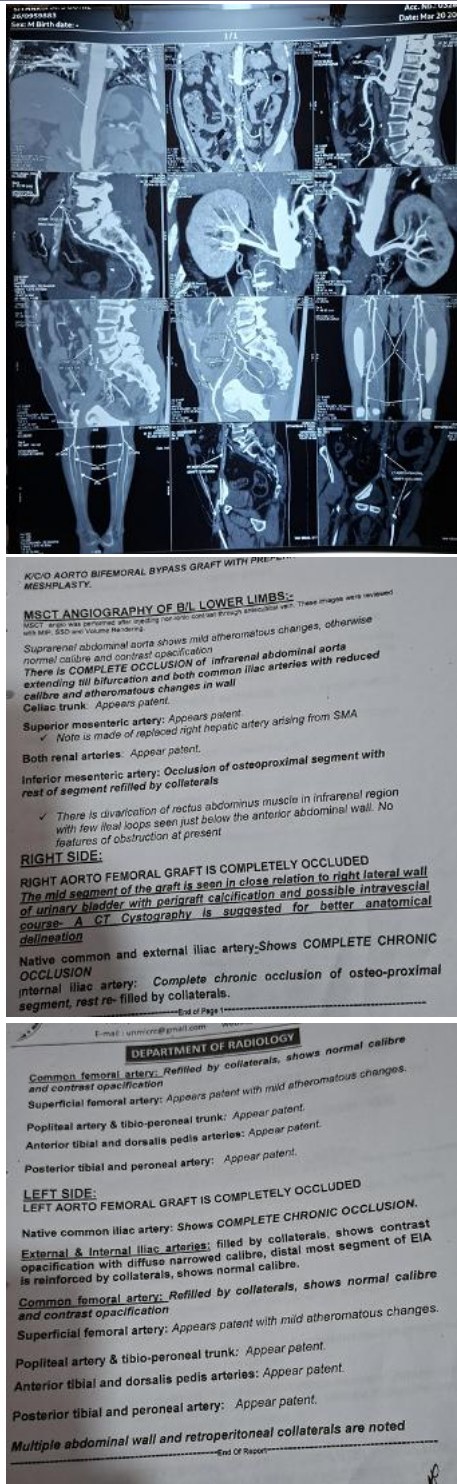


Figure 1. Operative findings and vascular surgery notes documenting graft-related infection and surgical management.

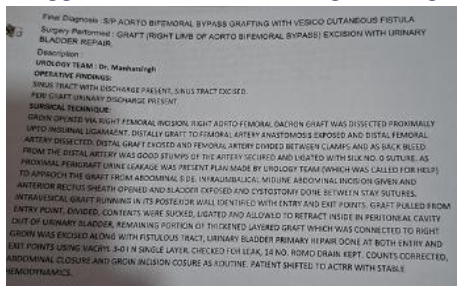


Figure 2. Clinical photograph showing chronic discharging sinus

over the right groin region at the previous vascular graft incision site.



Figure 3. Intraoperative image demonstrating exposure of infected prosthetic graft material within the groin wound.



Figure 4. Surgical debridement of infected tissue surrounding the vascular graft during operative exploration.



Figure 5. Intraoperative exposure of prosthetic vascular graft with surrounding inflammatory tissue and adhesions.



Figure 6. Surgical dissection demonstrating infected graft segment and adjacent vascular structures during graft excision.

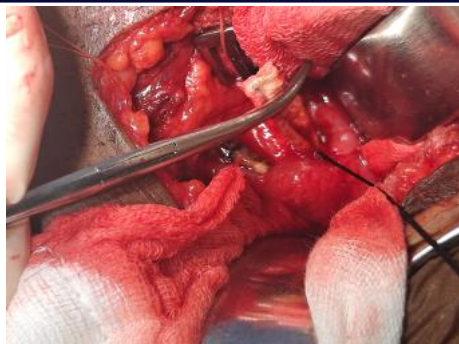


Figure 7. Operative image showing deep groin wound cavity following removal of infected tissue and graft exposure.



Figure 8. Intraoperative vascular control and dissection performed during excision of infected graft components.



Figure 9. Surgical field demonstrating residual infected tract and surrounding granulation tissue after debridement.



Figure 10. Excised infected prosthetic aorto-femoral graft specimen removed during surgery.



Figure 11. Postoperative wound status following debridement and

management of chronic graft infection.

Ethics declarations

Funding

The study did not receive any funding.

Conflict of interest statement

All authors declare that they have no conflict of interest and do not receive any research grants from any company, have not received a speaker honorarium from any company, do not own any stock in any company and are not members of a committee.

Authors' Statement

The patient consented to the submission and publication of this report.

Informed consent statement

Implied consent was obtained for all individuals involved in this study at the time of treatment initiation.

Statement of human and animal rights

All procedures were in keeping with accordance of the ethical standards of our institutional committee.

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