Reviewer's report

Title: Pseudoaneurysm of graft-graft anastomosis of a hand-sewn branched graft: a case report

Version: 3 Date: 7 June 2015

Reviewer: Mauro Iafrancesco

Reviewer's report:

Article assessment

Many thanks for asking me to review this paper entitled “Pseudoaneurysm of graft-graft anastomosis of a hand-sewn branched graft: a case report”.

The Authors describe the findings and the surgical repair of a pseudoaneurysm arising from the graft-graft anastomosis between a large straight graft used for arch replacement and smaller grafts used for anastomosis of the epiaortic vessels. The manuscript is well organized and concise.

While either anastomotic pseudoaneurysm at the site of anastomosis between the aortic graft and the native aorta or non-anastomotic pseudoaneurysm arising directly from the body of graft represent a recognized possible complication of open arterial aneurysm repair, presence of a pseudoaneurysm at the site of anastomosis between two grafts has not been previously reported.

Report of this case improves the knowledge in the field of aortic surgery as enlarges the spectrum of the known long-term complications related to surgical aortic intervention.

Even if it is unlikely that recognizing this kind of adverse feature of aortic graft replacement may change current clinical practice, giving its evident low incidence and the current availability of commercial branched graft, nevertheless it offers the clinicians treating patients who present with this condition a possible differential diagnosis of the origin of aortic pseudoaneurysms to be considered during preoperative evaluation.

Major Compulsory Revisions

None

Minor Essential Revisions

The Authors report that: “We made four holes on the 28 mm straight graft with a thermal cautery, and three straight grafts of 8 mm diameter were individually sewn with 3-0 polyester sutures before surgery”. It is not clearly described why the made four holes in the straight graft but anastomosed only three smaller grafts. Was the fourth hole used to reposition the perfusion cannula after hypothermic circulatory arrest? Please clarify this point.

Discretionary Revisions
None

The paper needs some language corrections before being published
1. Abstract line 5: “Computed tomography (CT) angiography showed a pseudoaneurysm on the branched graft during follow up; thus, we reoperated” is better replaced by: “During follow-up, serial CT scans showed a pseudoaneurysm on the branched graft which warranted re-intervention”
2. Abstract line 6: “Bleeding from the anastomoses of the hand-sewn branches was found. We repaired the bleeding with sutures under cardiopulmonary bypass” is better replaced by: “Surgical repair involved direct suture of multiple bleeding points which were found at the sites of the hand-sewn branches anastomosis”
3. Abstract line 9: “Care must be taken with hand-sewn branched grafts after graft replacement” is better replaced by: “Long-term follow-up is essential to detect late complications at the site of hand-sewn anastomosis”
4. Background line 2: “common” is better replaced by: “more”
5. Case presentation, line 12: “only thoracoabdominal replacement was performed” is better replace by: “only a thoracoabdominal aorta replacement was performed”
6. Discussion line 2: “We had made the” is better replaced by: “It has been our practice to realize”
7. Discussion line 12: “progressed” is better replace by: “progresses”
8. Conclusion line 2: “Care must be taken with hand-sewn branched grafts after graft replacement” is better replaced by: “Long-term follow-up is essential to detect late complications at the site of hand-sewn anastomosis”
9. All text: please replace all numbers between 1 to 9 with text.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Declaration of competing interests:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future? No
2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future? No
3. Do you hold or are you currently applying for any patents relating to the content of the manuscript? Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the
content of the manuscript? No
4. Do you have any other financial competing interests? No
5. Do you have any non-financial competing interests in relation to this paper? No