EXCLUSÃO DE UM VOLUMOSO ANEURISMA DA ARTÉRIA FEMORAL SUPERFICIAL ROTO COM DUAS ENDOPRÓTESES FORA DAS “INSTRUCTIONS FOR USE”

EXCLUSION OF A LARGE RUPTURED SUPERFICIAL FEMORAL ARTERY ANEURYSM WITH TWO ENDOPROSTHESIS OUTSIDE THE “INSTRUCTIONS FOR USE”

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RESUMO

Introdução: Apresenta-se um caso de rotura de aneurisma da artéria femoral superficial tratado com uma endoprótese fora das “Instructions for Use”.

Caso clínico: Doente de 83 anos com rotura sequencial de aneurismas de ambas as artérias femorais superficiais. À direita, o paciente foi submetido à cirurgia de bypass que resultou num período de recuperação prolongado, pelo que à esquerda se optou por uma abordagem endovascular. Procedeu-se à exclusão do aneurisma com duas endopróteses Endurant™/Medtronic®, Aos dois anos de follow-up o paciente encontra-se assintomático e sem endoleaks.

Conclusão: Apesar de fora das “Instructions for Use”, o uso de endopróteses na exclusão de um aneurisma da artéria femoral superficial revelou-se como um procedimento limb-salvage com um sucesso técnico e resultados a médio prazo excelentes.

Palavras-chave
Aneurisma femoral; Rotura; Endoprótese

ABSTRACT

Introduction: We present the case of a superficial femoral artery ruptured aneurysm treated with an endoprosthesis outside the “Instructions for Use”.

Case report: 83 years old patient with sequential rupture of both superficial femoral artery aneurysms. In the right limb the patient was submitted to conventional bypass surgery that resulted in an extended recovery period. An endovascular approach was the choice to treat the left ruptured superficial femoral artery aneurysm. The patient was submitted to aneurysm exclusion with two Endurant™/Medtronic® endoprosthesis. At two-year follow-up the patient is asymptomatic and the aneurysm remains excluded with no endoleaks.

Conclusions: Despite outside “Instructions for Use”, the use of an endoprosthesis to treat SFA ruptured aneurysm presented as limb salvage procedure with excellent technical success and medium-term results.

Keywords
Femoral aneurysm; Rupture; Endoprosthesis

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INTRODUCTION

Degenerative superficial femoral artery (SFA) aneurysms are rare and the literature regarding their management is scarce. The gold standard treatment of SFA aneurysms is surgical exclusion with an interposition graft or venous bypass \(^1\). However, the endovascular treatment of such aneurysms has been proposed as it presents as a less invasive procedure. So far, the use of covered stents is the choice when treating SFA aneurysms with satisfying midterm results \(^1\)–\(^3\). The purpose of this paper is to present a case of a patient with a SFA ruptured aneurysm treated with an Endurant™/Medronic® endoprosthesis. The use of these devices is indicated for the endovascular treatment of infrarenal abdominal aortic or iliofemoral aneurysms, which implies an outside the “Instructions For Use” application in this case \(^4\). Until the elaboration of this paper, the authors are unaware of other similar cases described in the literature.

CASE REPORT

We present a case of an 83 years old patient, heavy smoker, with chronic illness and non-mediated hypertension and dyslipidaemia. The patient was admitted to the emergency department with pain in the right thigh with two days evolution. At physical examination, he had fever, a palpable pulsatile mass in the right thigh associated with extensive inflammatory signs and bilateral palpable distal pulses. Patient’s blood cultures were negative. An AngioCT was performed and revealed a ruptured left SFA aneurysm with 9.7×12cm diameter.

Considering the contralateral limb surgical background, with delayed wound healing associated with broad surgical drainage, an endovascular approach was a tempting modality. Furthermore, the patient did not have good venous capital left and a prosthetic conduit was not considered given the local limb extensive inflammatory signs. Therefore, the team chose an endovascular treatment. Prior to surgery, informed consent was obtained with the patient. A left femoral common artery surgical approach was performed. The initial angiography revealed a left ruptured SFA true aneurysm (Figure 1).

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Figure 1  Left ruptured superficial femoral artery aneurysm in the initial angiography

After systemic heparinization (5000 UI), the aneurysm was crossed with a 0.035 hydrophilic guidewire and exchanged to a Terumo® stiff guidewire. The aneurysm was excluded with two Endurant™/Medronic® endoprosthesis 16×16×124mm and ballooned with an Optimed® Zelos PTA - Balloon Catheter 16mm×4cm.

Final angiography confirmed a proper exclusion of the aneurysm (Figure 2).
DISCUSSION

Degenerative SFA aneurysms are uncommon and occur mostly in elderly men. Most are found to be located in the middle third of the artery and present at diagnosis with large diameters. The most common manifestation is a pulsatile tender mass in the thigh, but rupture is also common (42%). Their treatment is advocated for a diameter ≥ 2.5 cm and has mostly been through conservative surgery. In the last years, endovascular treatment has been reported in the treatment of SFA aneurysms only in a few case reports with a very limited number of cases (less than 5). However, in these reports, authors have reported satisfactory one-year and five-year outcomes.

In this case, an endovascular approach was the treatment choice since the patient had no available venous conduit and extensive drainage after bypass surgery to contralateral SFA aneurysm rupture resulted in an extended recovery period and patient’s fragility. We could have thought of the possibility of using a prosthetic bypass in this case. However, given the high risk of graft infection and the fact that we did not have promptly available silver-coated conduits, it could not be considered as a safe option.

When evaluating the case, the patient had a large diameter SFA aneurysm, with proximal and distal landing zones of 17 and 13.5 mm, respectively, which precluded the use of peripheral approved covered stents. As this was a limb salvage situation, it was decided to exclude the SFA aneurysm with two Endurant™ Medtronic® endoprostheses, which were promptly available at our unit and met the size criteria of this case.

Despite the higher costs associated with this strategy when comparing to conventional surgery, this approach presented as successful procedure, with excellent technical success and medium-term outcome.

CONCLUSION

Despite outside the “Instructions for Use”, the use of an endoprosthesis to treat SFA ruptured aneurysm presented as limb salvage procedure in this case, with excellent technical success and medium-term results.
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