CASE REPORT

THE USE OF STENTS IN THE TREATMENT OF TRAUMATIC INTIMAL FLAPS: CASE REPORT

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Treatment of arterial traumatic intimal lesions is controversial due to its unknown natural history. Current therapeutic options include arterial reconstruction and clinical observation. The idea of using stents to correct intimal flaps is based on their use to correct dissections, flaps, and arterial irregularities after angioplasty.

We report the successful treatment of a traumatic intimal flap of the superficial femoral artery, caused by gunshot trauma, with a Palmaz stent in the acute period. One year after the operation, a duplex scan revealed normal flow in the artery and complete exclusion of the intimal flap; distal pulses were palpable, and the patient was completely asymptomatic.

DISCUSSION

Little is known about the natural history of intimal flaps due to ethical constraints of doing controlled studies in humans. Consequently, several animal studies have been carried out in order to evaluate the natural history of this disease.

There is a consensus in the literature that large arterial flaps have to be
treated surgically because they are considered to predispose thrombosis or rupture. For this reason, we opted to correct this intimal flap.

The idea to use a stent to correct the intimal flap was based on the use of stents for correcting dissections, flaps, and arterial irregularities after angioplasty. The role of stents as internal arterial skeletons that fix arterial irregularities was suggestive of using them to fix intimal flaps against the arterial wall, solving the problem.

We tested this hypothesis in an experimental model in dogs, where the use of stents proved to be better than the natural course with intimal flaps, preventing arterial thrombosis.

The potential advantages of the use of stents instead of invasive surgical intervention are the same as for endovascular procedures instead of conventional surgery in the treatment of obstructive peripheral disease. In precise indications, the results of endovascular procedures are similar to those of open surgery, and they are percutaneous procedures with lower morbidity, cost, and time of hospital stay.

Patients with intimal flaps are, in most cases, trauma victims; therefore, they are generally young people with previously normal arteries. Surgical procedures in these cases produce excellent results. However, in any type of invasive surgical procedure, a surgical incision is required, it is eventually necessary to use an arterial substitute or patch, and a long recovery time is usually required.

We present a new therapeutic option, in this case, with an excellent result of arterial permeability after 1 year. The prompt treatment avoided acute arterial occlusions, which may be the natural course of these lesions, especially when large flaps are produced.

Henceforth, patients with intimal flaps might be brought to the vascular operating room that is equipped with digital fluoroscopy and a radiotransparent table, or to an interventional radiology room (with a stand-by operating room available). Under local anesthesia or radicular block, the patient would undergo angiography. Once the intimal flap is found, a stent could be introduced using the same access, and it could be placed where it would be expanded with the help of fluoroscopy, correcting the lesion.
RESUMO


O tratamento de lesões arteriais íntimas de origem traumática é controverso pela sua evolução natural ser desconhecida. As opções terapêuticas atuais incluem reconstrução arterial e observação clínica. A ideia da utilização de "stents" para a correção de descolamentos íntimas é baseada no seu uso em disseções, "flaps" e irregularidades da artéria após angioplastia com balão.

Descrivemos o tratamento bem sucedido de um descolamento de íntima da artéria femoral superficial causado por ferimento de arma de fogo com a utilização de um "stent" de Palmaz na fase aguda. Um ano após a implantação do "stent", o duplex scan mostrou fluxo normal pela artéria com a exclusão completa do descolamento de íntima, com pulsos distais palpáveis e com o paciente completamente assintomático.


REFERENCES


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