Endovascular treatment of peripheral aneurysms in Kawasaki disease

Traitement endovasculaire d’anévrismes périphériques de maladie de Kawasaki

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A 7-week-old infant was referred to our department for refractory Kawasaki disease. Despite aggressive anti-inflammatory treatment, he had persistent biological and clinical inflammatory symptoms. Pulse corticosteroid therapy followed by infliximab injections and, finally, exchange transfusions were necessary to obtain regression of the fever. Besides echocardiography showing multiple coronary aneurysms, a computed tomography scan revealed peripheral aneurysms affecting the celiac trunk, the origin of the renal arteries, the mesenteric artery, the intercostal arteries and the axillary arteries (Fig. 1). Antithrombotic therapy was given to limit the risk of thromboembolic events. Clinically, the evolution was marked by the appearance of subclavian bilateral pulsatile masses. The right mass grew rapidly and was responsible for a plexus brachial block with oedema, impotence, trophic abnormalities and sensorimotor disturbances of the right arm. We attempted endovascular treatment. Two covered stents were positioned inside the vessel to exclude the mouth of the aneurysm (Fig. 2A and B). The follow-up confirmed a good result with regression of the oedema and progressive and complete neurological recovery. The coronary network was extremely affected (Fig. 3A) and the child had a myocardial infarction 18 days later due to occlusion of the circumflex artery (Fig. 3B). Five months later, echocardiography showed persistence of posterolateral akinesia but moderate left ventricular dysfunction. However, the patient’s clinical condition is good with no cardiovascular symptoms. This case highlights the potential severity of cardiac and non-cardiac vascular complications in early Kawasaki disease and shows that transcatheter treatment can be used to complement aggressive medical treatment.

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Figure 1. A computed tomography scan revealed peripheral aneurysms affecting mammary arteries (*) and axillary arteries (** →).

Figure 2. Endovascular treatments of peripheral aneurysms. (A) Multiple aneurysms of the right axillary artery (*) and blood diffusion by the mouth of the aneurysm (** →). (B) Endovascular treatment with two covered stents positioned inside the right axillary artery over the mouth of the aneurysm (# →).
Figure 3. Severe and multiple coronary network aneurysms. (A) Giant aneurysm of the main left coronary artery (* →) and occlusion of the circumflex artery (** →). (B) Giant and rosary aneurysms of the right coronary artery (# →).

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.