

The Endovascular Treatment of Abdominal Aortic Aneurysm in Brazil—Evolution and Perspectives

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Introduction

Parodi performed the first intraluminal Endovascular Abdominal Aortic Repair (EVAR) in humans, to treat an Abdominal Aortic Aneurysm (AAA), in 1989 [1]. Since then, experimental studies and clinical work emerged, changing the treatment of aortic pathology, until then based on conventional procedures with open surgery. Historically, open techniques were used to prevent rupture [2]. Like other new endoluminal treatments, EVAR has generated a great deal of interest and studies. Worldwide, as well as in Brazil, different devices have been used to treat AAA [3].

In 1994, Claudio Schonholz, with P. Puech Leao, treated the first AAA by EVAR in Brazil. In 1995, Parodi and Puech Leão, treated three more aneurysms, all with tubular, homemade, straight endograft. In 1996, the late Renan Uflacker and A. Pereira implanted the first bifurcated endograft in Brazil—a Talent device. In the same year, Puech Leão implants the first Vanguard bifurcated in the country [4]. EVAR was introduced in Rio de Janeiro with G. Lopez, M. Ferreira and Av Ristow, independently, in 1997. The delay of the introduction in Rio de Janeiro is accredited to market reserve. Lopez started with Talent, Ferreira with Vanguard and Ristow, with homemade endografts, according to Parodi's instructions. A few months later, Ristow implanted the first Brazilian made bifurcated endograft, Apolo I [4].

Specialized teaching centers in endovascular surgery were created in Brazil: The pioneer was P. Puech Leão, followed soon by M. Ferreira, with the SITE, the first meeting with live cases. More extensive courses started with A. Lobato, A. Razuk, P. Silveira, C. Abath and others.

The first fenestrated endografts were implanted in Brazil in 2004—the Nano Apolo Voyager Repositionable Fenestrated Endograft and the first series of cases of treatment of juxta and para renal aneurysms was published in the Brazilian literature by Ristow et al. [5]. In 2006, Ferreira et al. implanted the first branched Cook device in Brazil, and started a tutorship in many Latin American countries [6].

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In Brazil private and public health systems (SUS) coexist. In SUS the first cases of EVAR were performed in the University of São Paulo, in 1994. In 2012 data, 1,600 aortic aneurysms treated yearly in SUS. Of these, 1,200 were EVAR and this number is steadily increasing. Since 2008, the number of EVAR doubled in SUS [7].

Future Perspectives

After more than 20 years of EVAR in Brazil, most AAA cases are treated by the method, either in private practice or in SUS. In Ristow's Institution, Centervasc-Rio, more than 90% of the AAA cases were treated by EVAR in the last three years. Results are better with EVAR than in open AAA treatment, but they still can improve, especially in SUS. Continued evolution of endograft technology and the excellent results of EVAR stimulate us all in improving the endovascular technique.

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