

Isolated Common Iliac Artery Aneurysms

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Isolated iliac aneurysms, without aortic involvement, are quite rare. Their prevalence in the general population is estimated at 0.03%, accounting for 2-7% of all intraabdominal aneurysms, and for 0.6 % of all aortoiliac aneurysms. 70-80% of them, respect to common iliac aneurysms and 10-30 % involve the internal iliac artery, while the external iliac artery is seldom affected. Male to female ratio is 5-16/1. 50% of them is bilateral. As far as complications are concerned, apart from embolism, thrombosis and compression of adjacent structures, rupture is the most hazardous. For aneurysms between 3 and 4 cm in diameter the risk of rupture is 5-9 % during 5 years. For those greater than 4 cm, the risk of rupture is independent upon the exact diameter, but highly increased, ranging from 10 to 70 % during 5 years. Moreover mortality from rupture is 25-57 %. Conventional surgical repair is the classical treatment for iliac aneurysms greater than 3cm in diameter and for symptomatic or ruptured aneurysms. In elective open procedures the mortality is even higher than elective AAA repair, ranging between 5-11 %, while in emergency operation after rupture, is dramatically high, arising to 40-50 %.

During the latest years, an alternative option for treating isolated iliac aneurysms has developed, which consists of prompt endoluminal exclusion by covered endoprosthesis. This technique, has recently been evolved to provide an effective and minimally invasive option for treating such aneurysms, especially in patients at high surgical risk. Early experience, from the first series reported, was quite disappointing with early and late adverse event rate of 27 %. Following publications, after rapidly developed techniques and devices, reported encouraging results, proving the feasibility and efficacy of the method. Primary and secondary patency rates are 92 and 96 %. However, major precondition for safe and complete aneurysm exclusion, is the adequate length of proximal and distal landing zones (necks). When the distal landing zone is short, the problem is solved by landing the endograft more distally to the external iliac artery, at the price of hypogastric artery occlusion, or by using bell bottom technique when the distal common iliac is up to 22mm in diameter. On the other hand, when the proximal neck is short (less than 10 mm) direct deployment of iliac endoprosthesis is generally contraindicated. Instead, a classical bifurcated aortoiliac endograft deployment, or an aortouniliac endograft plus femoro-femoral crossover bypass can be performed, with or without open or endovascular external to internal iliac by pass.