Part Two: Against the Motion

Nonoperative Versus Surgical Management of Small (Less than 3 cm), Asymptomatic Popliteal Artery Aneurysms

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The decision to treat a popliteal aneurysm requires weighing the risks and results of treatment against the risks of continued follow-up. Like aortic aneurysms, popliteal aneurysms may cause no symptoms for an extended period, but, unlike their aortic counterparts, are more likely to present with an ischemic complication rather than rupture. Dawson et al. 1 have underscored the danger of critical limb ischemia and limb loss in untreated popliteal artery aneurysms. Interestingly, this paper reported that 40% of asymptomatic patients with a popliteal aneurysm will have absent pedal pulses, which adversely affect the natural history with a likelihood of symptoms developing of 86% at 3 years as compared with 34% in asymptomatic patients with intact pulses.

Both of our debaters agree that it is problematic to base treatment decisions on diameter alone, as opposed to the situation with abdominal aneurysms where there exists a tighter linkage between aneurysm complications and diameter. In this debate, Dr. Hingorani develops these arguments for early intervention on small asymptomatic popliteal aneurysms based on long-term graft patency and limb salvage rates that are usually greater than 95% when using a saphenous vein, and a low perioperative mortality rate of around 1–2%.

In opposition, Professor Galland suggests that many asymptomatic aneurysms of 3 cm in diameter can be safely observed. The arguments for this approach are based on the observation that asymptomatic aneurysms without intramural thrombus or distortion from excessive tortuosity and with intact distal pulses rarely cause symptoms. Moreover, although results with surgery have generally been excellent, complications and deaths have occurred, especially in patients with no saphenous vein available, severe co-morbid conditions or those who are very elderly.

But both debaters agreed that the results of surgical treatment are best in asymptomatic patients and progressively worse in those with chronic ischemic symptoms and critical limb ischemia. Without the results of a multicenter prospective randomized trial, the decision regarding treatment remains one of clinical judgment and must be individualized to the specific patient and clinical situation. Moreover, many of the previous arguments were based on results in the era before endovascular therapy. For young active patients early bypass using a saphenous vein is certainly a valid option, in frail patients with limited life expectancy, observation of even large aneurysms with minimal intraluminal thrombus, palpable distal pulses, and no evidence of continued expansion can be proposed. When treatment is required in this older and frailer subset of patients, endovascular repair could be considered the preferred method of repair providing there is favorable anatomy.

Reference


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