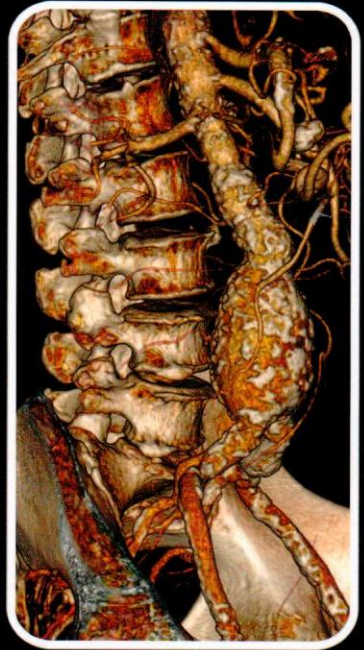
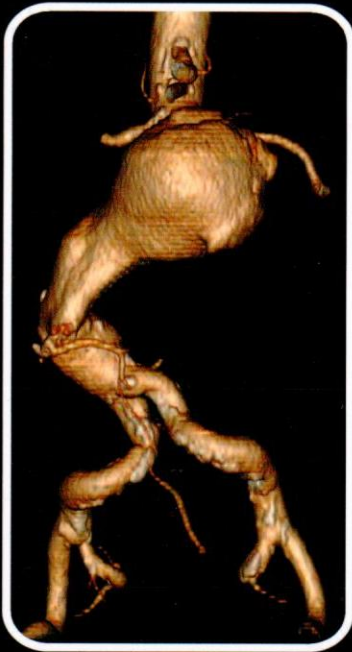


Maurizio TAURINO

ABDOMINAL AORTIC ANEURYSMS

Anatomy, pathophysiology
and advanced
treatment



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MEDICA

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Managing ruptured abdominal aortic aneurysms: current strategies

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Introduction and definitions

A ruptured abdominal aortic aneurysm (rAAA) is a critical and often fatal vascular emergency. The majority of AAA are asymptomatic until rupture, so early detection is essential for reducing mortality and to ensure immediate and decisive surgical intervention is provided. AAA rupture can be overt (associated with extraluminal hemorrhage) or contained by the surrounding retroperitoneal or adjacent anatomical structures, forming a periaortic hematoma and temporarily limiting free bleeding. A symptomatic unruptured AAA is characterized by aneurysm tenderness on palpation, or abdominal, back, or flank pain attributed to the aneurysm in the absence of radiological or surgical evidence of rupture. Symptoms often precede rupture, necessitating prompt evaluation and management.

Epidemiology

Each year, approximately 1-2% of patients with a known aneurysm will experience rupture (15-25 per 100,000 people per year in the general population). AAA predominantly affect elderly males, with an estimated prevalence of 6%-8% in men over the age of 60 years. Women are affected less frequently, but they carry a higher risk of rupture at smaller diameters. Aneurysm diameter remains the most significant and widely accepted predictor for determining surgical intervention thresholds. The annual rupture rates have been reported as 3.5% for aneurysms measuring 5.5-6.0 cm, 4.1% for those measuring 6.1-7.0 cm, and 6.3% for aneurysms exceeding 7.0 cm.¹

The introduction of population-based screening programs, especially in high-risk male populations aged ≥ 65 years, has improved early detection rates and decreased aneurysm-related death. Despite these advances, a rAAA remains a critical emergency with a mortality rate of up to 80%-90%. Two thirds of patients