
Acute Mesenteric Ischaemia: Incidence, Diagnosis, Management, Outcomes



Acute mesenteric ischaemia (AMI) is a rare condition with challenging diagnosis due to nonspecific symptoms and lack of established diagnostic biomarkers. Existing evidence suggests high mortality rates with limited improvement in outcomes over time. Recent estimates indicate an incidence of approximately 5–7 cases per 10,000 hospital admissions, likely underestimated due to poor recognition. Different subtypes of AMI (occlusive arterial, venous, non-occlusive) involve various medical specialties in diagnosis and management, with incomplete understanding of their similarities and differences. Delayed diagnosis and heterogeneous management contribute to poor outcomes.

Recent guidelines emphasise computed tomography angiography for diagnosis, immediate surgical treatment for overt peritonitis, and revascularisation for occlusive arterial AMI, but uncertainty remains in other recommendations.

Given the rarity, complexity, and interdisciplinary nature of AMI management, a new study aims to determine its true incidence and characterise patient demographics, diagnostic approaches, management strategies, and outcomes across its subtypes.

The study included adult patients with suspected AMI who were admitted or transferred to 32 participating hospitals between June 6, 2022, and April 5, 2023. Patients who were later found not to have AMI or had localised intestinal gangrene due to strangulating bowel obstruction were still included but only had baseline and outcome data collected.

As per the findings of the study, AMI occurred globally in 0.038% of adult admissions in participating acute care hospitals. Out of 705 included patients, 418 were confirmed to have AMI. In 69% of cases, AMI was the primary reason for admission, while in 31%, it occurred after admission with another diagnosis. The median time from symptom onset to hospital admission for AMI patients was 24 hours, and the time from admission to diagnosis was 6 hours. Among the diagnosed cases, occlusive arterial AMI was the most common (55.3%), followed by venous (17.5%) and non-occlusive (13.2%) types. Surgery was the initial management for 58% of patients, with 24.4% undergoing revascularisation. Endovascular revascularisation alone was performed in 13% of cases, conservative treatment in 18%, and palliative care in 11%. Among patients with occlusive arterial AMI, 45% underwent revascularisation, with 38% being treated in selected centres.

The overall in-hospital mortality for AMI was 49%, with a 90-day mortality rate of 53.3%. Mortality rates varied significantly between subtypes, being lowest for venous AMI (13.7% in-hospital and 16.4% at 90 days) and highest for NOMI (72.7% in-hospital and 74.5% at 90 days). There was considerable variability between participating sites for most variables studied.

These findings highlight the global variation in the incidence of AMI and its subtypes and emphasise the challenge of accurately identifying cases. Findings show that pre-hospital delays in seeking medical attention exceeded delays after hospital arrival. The most common initial management strategy was surgery without revascularisation. Nearly half of AMI patients succumbed during their initial hospital stay.

These results highlight the importance of raising awareness about AMI and the necessity for improved diagnostic and management protocols.

Source: [Critical Care](#)
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