QUESTION 59 Carotid

A 67-year-old man, with a history of smoking 20 cigarettes per day, presents with acute onset of painless loss of vision in the right eye, as if a curtain has suddenly descended over the right eye. After five minutes, vision returned quite rapidly. There are no associated neurological symptoms. Cranial magnetic resonance imaging (MRI) is normal. His carotid angiogram is shown below:

Which one of the following interventions will give the greatest reduction in his risk of stroke or death in the next year?
A. Aspirin.
B. Aspirin/dipyridamole.
C. Clopidogrel.
D. Early revascularisation (< 6 weeks).
E. Late revascularisation (> 6 weeks).

Medical therapy
1) Asprin
   - 18% reduction in end points (cardiovascular and non-cardiovascular events and mortality)
   - Optimal dose of asprin is uncertain, there is no compelling evidence that any specific dose is more effective than another
   - Suggested a dose of 50-81mg/day
   
   **Asprin plus dipyridamole**
   - Significantly more effective than asprin alone for stroke prevention
   - Now considered first line initial therapy for preventing recurrent non cardioembolic ischemic strokes
   
   **Asprin plus clopidogrel**
   - Does not offer greater benefit for stroke prevention than either agent alone but does substantially increase the risk of bleeding complications (MATCH trial)
   - But does show a benefit over asprin alone in patients with acute coronary syndromes

2) Clopidogrel
   - An alternative to asprin if not tolerated

3) Ticlopidine
   - Rarely used due to side effects
   - Should be reserved for patients intolerant of asprin and clopidogrel
   - Similar to clopidogrel in action (adenosine phosphate inhibitor)
   - Severe neutropenia 1% of pt

4) Oral anticoagulation
   - Recommended for atrial fibrillation with a recent stroke of TIA
   - Recommend asprin for pt with AF and cardioembolic stroke who have contraindications to anticoagulation

   **Carotid endarterectomy (CEA) for symptomatic carotid stenosis**
   - American Academy of Neurology in 2005
   - American Heart Association/American Stroke Association in 2006

**Symptomatic 70-99%**

CEA recommended with recently symptomatic carotid stenosis of 70 – 99 % who have a life expectancy of at least 5 years
- Provided the perioperative risk of stroke or death for the surgeon or center is < 6%
- NNT to prevent one stroke over 5 years is 6.3

**Symptomatic 50-69%**

Beneficial for men with 50-69% symptomatic stenosis
- NNT over 5 years in this group is 22.

However women with 50-69% symptomatic carotid stenosis have not shown clear benefit
- Medical management rather than CEA for women with recently symptomatic carotid stenosis of 50-69%.

**Symptomatic <50%**

Medical management for symptomatic carotid stenosis < 50%
- CEA not beneficial for symptomatic carotid stenosis of 30-49%
- CEA is harmful for symptomatic patients with less than 30% stenosis

**Timing of surgery (Grade 1B)**

Greatest benefit if performed within 2 weeks of last symptomatic event with >70% carotid stenosis
CEA may not be beneficial if performed 2 weeks or longer after the last event if pt has 50-69% stenosis
Recommend CEA to be performed without delay, preferably within 2 weeks of last symptomatic event

**Other factors:**
CEA is not associated with significant benefit for patients with near occlusion of the symptomatic ipsilateral internal carotid artery
Patients with hemispheric TIA appear to have greater benefit than pts with transient retinal ischemia
Coexisting severe contralateral carotid stenosis or occlusion may increase perioperative risk but does not cancel out benefit.

**Back to the question:**
Patient with symptomatic carotid artery stenosis (70%), the greatest benefit would be early revascularisation.
Answer D.