LOOP study

#ESCCongress

Screening for atrial fibrillation with an implantable loop recorder to prevent stroke

Conclusion

Continuous heart rhythm monitoring – with anticoagulation if atrial fibrillation (AF) is detected – does not prevent stroke in those at risk.

Impact on clinical practice

AF is the most common heart rhythm disorder, affecting more than 33 million people worldwide. The disorder increases the risk of stroke by 5-fold, but this risk can be reduced with anticoagulation treatment. The LOOP Study was initiated because patients with AF are often asymptomatic and thus remain undiagnosed and untreated.

Study objectives

The study investigated whether continuous electrocardiogram (ECG) monitoring using an implantable loop recorder (ILR), and subsequent anticoagulation if AF was detected, would reduce the risk of stroke or systemic arterial embolism in patients at risk.

Who and what?

Danish national registries

Individuals from the general population

- aged ≥70 years
- ≥1 additional stroke risk factor: hypertension, diabetes, heart failure, previous stroke

Exclusion criteria

- any history of AF
- currently using oral anticoagulation (OAC)
- contraindication to OAC
- cardiac implantable electronic device

6,004 patients

1,501 Continuous ECG monitoring ← randomised 1:3 → 4,503 Standard care

If detection of AF > 6 minutes → OAC

Results

Median duration of monitoring: 39.3 months

Median follow-up: 64.5 months

AF diagnosed: 31.8% vs 12.2%

HR: 3.17; 95% CI: 2.81-3.59; *p<0.001*

OAC initiated: 29.7% vs 13.1%

HR: 2.72; 95% CI: 2.41-3.08; *p<0.001*

Primary endpoint

Combined endpoint of stroke or systemic arterial embolism: 4.5% vs 5.6%

HR: 0.80; 95% CI: 0.61-1.05; *p=0.11* (n.s.)

Cardiovascular death

2.9% vs 3.5%

HR: 0.83; 95% CI: 0.59-1.16; *p=0.27* (n.s.)

All-cause death

11.2% vs 11.3%

HR: 1.00; 95% CI: 0.84-1.19; *p=1.00* (n.s.)

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