

## **Risk of Adverse Cardiac and Bleeding Events Following Cardiac and Noncardiac Surgery in Patients With Coronary Stent: How Important Is the Interplay Between Stent Type and Time From Stenting to Surgery?**

Saia F, **Belotti LM**, Guastaroba P, Berardini A, Rossini R, Musumeci G, Tarantini G, Campo G, Guiducci V, Tarantino F, Menozzi A, Varani E, Santarelli A, Tondi S, De Palma R, Rapezzi C, Marzocchi A.

### **Abstract**

#### **BACKGROUND:**

Epidemiology and consequences of surgery in patients with coronary stents are not clearly defined, as well as the impact of different stent types in relationship with timing of surgery.

#### **METHODS AND RESULTS:**

Among 39 362 patients with previous coronary stenting enrolled in a multicenter prospective registry and followed for 5 years, 13 128 patients underwent 17 226 surgical procedures. The cumulative incidence of surgery at 30 days, 6 months, 1 year, and 5 years was 3.6%, 9.4%, 14.3%, and 40.0%, respectively, and of cardiac and noncardiac surgery was 0.8%, 2.1%, 2.6%, and 4.0% and 1.3%, 5.1%, 9.1%, and 31.7%, respectively. We assessed the incidence and the predictors of cardiac death, myocardial infarction, and serious bleeding event within 30 days from surgery. Cardiac death occurred in 438 patients (2.5%), myocardial infarction in 256 (1.5%), and serious bleeding event in 1099 (6.4%). Surgery increased 1.58x the risk of cardiac death during follow-up. Along with other risk factors, the interplay between stent type and time from percutaneous coronary intervention to surgery was independently associated with cardiac death/myocardial infarction. In comparison with bare-metal stent implanted >12 months before surgery, old-generation drug-eluting stent was associated with higher risk of events at any time point. Conversely, new-generation drug-eluting stent showed similar safety as bare-metal stent >12 months and between 6 and 12 months and appeared trendly safer between 0 and 6 months.

#### **CONCLUSIONS:**

Surgery is frequent in patients with coronary stents and carries a considerable risk of ischemic and bleeding events. Ischemic risk is inversely related with time from percutaneous coronary intervention to surgery and is influenced by stent type.