

## ***CARDIAC CATHETERIZATION, CORONARY ANGIOGRAPHY (CA) AND PCI IN AUSTRIA DURING THE YEAR 2008 (Registry Data with AUDIT 2004 through 2009)***

51,292 diagnostic coronary angiographies (CA) and 19,727 percutaneous coronary Interventions (PCIs) were done in Austria during the year 2008. The country hosts 37 centers for diagnostic studies in adults, all of them perform PCI as well. There is a decrease of -1.9 % concerning coronary angiography and an increase of +2.0 % in PCI compared to 2007. The PCI/CA ratio increased significantly from 2001-2006 from 31.1% to 38.0% ( $p \leq 0.001$ ), then decreased to 37.0 % in 2007 and reaches 38.5% in 2008.

PCI during or for myocardial infarction (acute PCI) was performed in 6686 cases (including 3677 registered STEMI), this is a significant increase of acute PCI from 11.7% during the year 2002 to 33.9 % of PCI in 2008 ( $p \leq 0.001$ ). Overall Mortality 2008 after PCI was reported in 1.04 %, after elective (non acute) PCI in 0.276 % (36/13,041) and after acute PCI for myocardial infarction in 2.53 % (169/6688). After acute-PCI 64/6326 (1.01 %) patients died having an infarction without, and 105/360 (29.17 %) patients died after acute PCI having an infarction with preceding cardiogenic shock. Emergency bypass surgery rate after PCI was 0.076 % and 7 out of the 15 patients died after emergency surgery due to failed PCI.

In 17,340 cases stents ( 87.9 % of all PCI cases) were implanted. Drug eluting stents (DES) were used in 66.8 % of stent-cases in 2008, compared to 69.2 % during 2006 and 64.1 % in 2007. Everolimus – for the first time in 2008 – is the most frequently used coating with 4332 documented cases in 2008 (Paclitaxel was leading with 3550 cases in 2007). During 2003 - 2007 4.9% - 5.2 % and in 2008 6.7% of all PCI-cases were done due to in-stent-restenosis (REDO), whereas the relative percentage of acute stent thromboses as a cause of REDO rose from 8.5% in 2007 to 14.8% in 2008

The relative usage of the following procedures increased (% of all PCI-cases in 2008): puncture site closing devices (74.6 %), clot catcher/remover (5.4 %), intracoronary ultrasound (5.6 %), intracoronary pressure (7.8 %), direct thrombin inhibitors (3.0 %), left main stenting (2.1 % of all stent-cases), optical coherence tomography (OCT; 0.57%) and transcatheter aortic valve implantation (TAVI) with 144 cases in 2008. For the first time in Austria in 2008 stereotactic navigation was performed. At the same time non-coronary catheter-interventions (myocardial biopsies, electrophysiology/ablations, defect closure procedures and pacemaker implantations within cathlabs) showed increasing numbers in 2008.

Thirty audits were performed during 2004-2009 in 29 of the 37 Austrian cath-labs. International comparison lists Austria (8.299 million inhabitants) under the top nations with 6180 CA and 2377 PCI per one million inhabitants, as well as far as the PCI/CA and DES/stent ratios for 2008 are concerned. Communication was improved with help of <http://iik.i-med.ac.at/>.

**In conclusion** during the year 2008 trends of the past years again are reversed by decreasing the number of CA and non-acute PCIs, whereas DES cases reached a plateau already in 2007. PCI-cases due to in-stent-restenosis increased in 2008 due to a higher percentage of acute stent thromboses compared to 2007. The usage of puncture site closing devices and some seldom used special devices continued increasing slightly.