Study: Using isosmolar contrast agent during angioplasty reduces risk of renal and cardiac events

Last updated: Thursday 21 May 2015 at 7am PST

Significantly fewer renal and cardiac events are associated with angioplasty procedures using isosmolar contrast medium (IOCM) agent Visipaque™ (iodixanol) than those using low-osmolar contrast media (LOCM), demonstrate data from abstracts presented at the EuroPCR Congress 2015 in Paris.

The abstracts are based on a study that analyzed data from 334,001 angioplasty procedures from the Premier hospital database in the USA and was funded by GE Healthcare. The results showed 10.5% fewer major adverse renal and cardiac events (MARCE) when Visipaque was used compared to LOCM (p<0.01). Those hospitals that only used IOCM or LOCM observed an even greater benefit with 26.7% fewer MARCE events in the group receiving IOCM compared to LOCM. Visipaque was more frequently used in angioplasty procedures amongst the elderly and more critical patients as measured by the Charlson Comorbidity Index.

"The results of this study are highly encouraging and support the use of isosmolar contrast media in high-risk percutaneous coronary intervention. These data suggest that prior studies with signal of reduced risk of contrast-induced acute kidney injury with Visipaque do indeed translate into a reduction in clinically meaningful major adverse cardiac and renal events." Dr Peter McCullough, Vice Chief of Medicine at Baylor University Medical Center, Dallas.

**About the Study**

This extensive retrospective study, based on patient billing, hospital cost and coding history data collected between January 2008 and September 2013, evaluated 334,001 angioplasty procedures. IOCM was used in 30.8% of cases and the angioplasty procedures that used Visipaque were in older patients (66.8 years versus 63.8, p<0.01) and sicker patients based on the Charlson Comorbidity Index (4.0 versus 3.4, p<0.01). IOCM was also used in more emergency procedures and with more patients who were classified as major or extreme on the 3M™ APR-DRG Mortality and Severity Indexes than LOCM.

After controlling for patient demographics, comorbid conditions, year, hospital characteristics and variations using the hospital fixed effect specification method, the results from the study found:

* 10.5% fewer MARCE events were observed with use of IOCM compared to LOCM.
* In hospitals using solely IOCM or LOCM, 26.7% fewer MARCE events were observed with use of IOCM compared to LOCM.
* 2.7% fewer renal failure events were observed with use of IOCM compared to LOCM
* 0.6% fewer kidney injury events were observed with use of IOCM compared to LOCM

"These data are promising and indicate that the use of Visipaque™ may result in fewer complications associated with angioplasty, allowing physicians to perform these lifesaving procedures in patients who are at risk of complications" said Jan Makela, General Manager, Core Imaging, GE Healthcare Life Sciences.

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