

HUMAN GENETICS & GENETIC DISEASES

and

MOLECULAR MEDICINE & DIAGNOSTICS

Iatrogenic iodinated contrast induced nephrotoxicity

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Purpose: The aim of the study is to assess the effect of intravenous iodinated contrast media on renal function in patients undergoing CT pulmonary angiogram (CTPA), CT thorax abdomen and pelvis (CT-TAPC) or CT abdomen and pelvis (CTAPC) with contrast.

Methods & Materials: This was a retrospective study of 443 patients who underwent a CTPA, CT-TAPC or CTAPC in 2015/16 and were administered 60 ml, 75 ml of Omnipaque 350, respectively, during the procedure.

Results: 33.9% (n=150) of CT studies requiring administration iodinated contrast showed a decrease in eGFR within 72 hours after the procedure with an average decrease in eGFR of 11.8 ± 10.9 ($p < 0.01$), median 9.3. 36.2% (n=17) of CTPA patients, 48.2% (n=31) of CT-TAPC and 32.2% (n=102) of CTAPC patients showed a decrease in eGFR post procedure with an average reduction in eGFR of 11.3 ± 12.3 ($p < 0.01$), median 6.3; 11.1 ± 8.9 ($p < 0.01$), median 8.6; and 12.4 ± 11.6 ($p < 0.01$), median 10.6, respectively. Furthermore, 6.9% (n=7) of CTAPC patients continued to have a reduced eGFR after 28 days.

Conclusion: Administration of iodinated contrast medium in patients is associated with a decrease in eGFR in a significant proportion of patients undergoing CT studies. In patients receiving the higher dose of 75 ml, a significant proportion of patients continue to have a reduced eGFR after 28 days.

Biography

Abdulkarim Jamal had completed his Postgraduate training in Radiology in Leicester training scheme, UK, where he obtained the FRCR. Currently he is a Consultant Radiologist at George Eliot Hospital and a Visiting Research Fellow to Warwick University. His current research interest is in the field of reduction of intravenous contrast in CT examination and the effects on renal function where he had published several papers and whole body MRI.

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