Cardiovascular effects of angiogenesis inhibitors

The introduction of angiogenesis inhibitors such as Bevacizumab and Sunitinib has revolutionized the therapy of various metastatic cancers including renal cell, pancreatic and lung cancer. Although referred to as ‘targeted therapy’, these drugs have important side effects, in particular hypertension (over 50% of patients), heart failure and renal impairment. Better knowledge on the mechanism of these adverse cardiovascular effects provides us opportunities to increase our knowledge of the role of angiogenic factors (in particular VEGF) in (patho) physiology of the cardiovascular system and may highlight new therapeutic options to prevent or treat these adverse events in patients with cancer. This keynote lecture will address recent own research in the context of international literature. In particular, the role of endogenous VEGF in regulation of vascular tone and the role of the endothelial vasorelaxing factors, Renin Angiotensin Aldosteron System and endothelin in the mechanism of Sunitinib-induced hypertension will be discussed. Data on (lack of) direct acute cardiotoxicity of sunitinib will be presented. Finally, the potential impact of a hypothesis-generating observation on the impact of sunitinib on insulin clearance will be discussed.

Biography

Gerard A Rongen has completed his PhD from Radboud University Medical Center (Radboud UMC) and Post-doctoral studies from University of Toronto and Mount Sinai Hospital, Toronto. He completed his specialty training in Internal Medicine in 2000. In 2011, he was appointed as Professor in Translational Cardiovascular Research at Radboud UMC. He has published more than 100 papers in reputed journals and serves in the executive boards of the Dutch Society for Clinical Pharmacology and the European Association of Clinical Pharmacology and Therapeutics.

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