Saudi Arabia and identify the rate of primary and secondary pulmonary hypertension among pediatric patients with Down syndrome. Cross-sectional, retrospective study of the cardiac anomalies among 331 pediatric patients (0–18 years) with Down Syndrome in King Khalid University Hospital (KKUH) from August 2001 till October 2014. The demographic data, reason for referral, echocardiography data including systolic function parameters, the presence of CHD, type and details of CHD, presence of pulmonary hypertension (PHTN), history of cardiac surgeries or transcatheter interventions. Among the 331 pediatric patients with Down Syndrome; 230 patients (69.5%) have Congenital Heart Defect (CHD). The patients with CHD were significantly younger (median age 3 months) with lower weight (P-value <0.05) and height (P-value <0.05) compared to patients with no CHD. The median age at first assessment was 3 months. The most common type of CHDs among DS pediatric patients was atrial septal defect secundum (ASD II) which account for 33.5% of all CHD followed by ventricular septal defect (VSD) which account for 26.5%, then atrioventricular septal defect (AVSD) 21.7% and moderate to large patent ductus arteriosus (PDA) 21.7%. There is another (11.7%) who have other CHDs. Pulmonary hypertension was present in 32% of patients with CHD vs 4% among patients with no CHD. There is significant relationship between CHD and pulmonary hypertension with odds ratio 11.3 (CI 3.99–31.83, P-value <0.05). 15% of patients underwent either cardiac surgery or transcatheter intervention. Almost two thirds of Down Syndrome patients have CHD with pulmonary hypertension affecting almost one third of patients with CHD. The most common CHD among Down Syndrome patients were ASD, VSD, AVSD and moderate to large PDA. Early detection is required to facilitate early management and prevent complications manage patients and preform early interventions as appropriate.

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77. Ultrasonography assessment of congenital renal anomalies in children with congenital heart diseases

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Ultrasound (US) assessment of renal anomalies in children requiring pediatric cardiac surgery is not a standard practice. This study aimed to study the role of bedside US performed by intensivists to detect occult renal anomalies associated with congenital heart disease (CHD). Prospective descriptive study for 100 consecutive children with CHD admitted to Pediatric Cardiac Intensive Care Unit (PCICU) from January 1st, 2015 through June, July 2015. Ultrasound of kidneys was performed initially by trained pediatric cardiac intensivists to ascertain the presence of both kidneys in renal fossae and to check for gross kidney anomalies. After screening of 100 consecutive children with CHD with renal US, we identified in 94 cases (94%) normal right and left kidney in the standard sonographer shape in the renal fossae. In 6 cases further investigation revealed ectopic kidney in 3 patients (50%), solitary functional kidney in 2 patients (33.4%) and bilateral grade IV hydronephrosis in one patient (16.6%). Urinary tract infection developed peri-operatively in 66% of the cases with kidney anomalies. No significant renal impairment was noted in these patients post-surgery. We observed no specific association between the type of renal anomaly and specific CHD. Renal US in children with CHD demonstrated prevalence of associated congenital renal anomalies in 6% of children undergoing cardiac surgery. The presence of occult kidney anomalies did not impact the kidney function or the short term outcome after cardiac repair except for an increased risk of urosepsis. Performing renal US should be a standard practice in all children with CHD.

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WORKPLACE HEALTH

78. Environmental air pollution: A new emerging factor for coronary artery disease

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Objectives: The Arab world covers a vast geographic area, consisting of 23 countries with a combined population of about 358 million people. Geographically, this part of the globe is variable ranging from dry desert areas to heavily raining green land. It is unique for its wide cultural, social, ethnic variations and in pattern of health and disease. The rapid economical changes in Middle East attract large number of people to the metropolitan cities of Middle East especially the Gulf Cooperation Council (GCC) countries. The urban areas of Middle East are facing challenges of air pollution driven by industrialization and rapidly growing vehicle fleets. The aim of this study was to investigate the effects of air pollution on coronary artery disease.

Material and methods: In this study, we identified 72 published studies through a systematic database searches including ISI-web of science and pub-med. We searched the related literature by using the key words including environmental pollution, coronary artery disease. All studies in which environmental pollution and coronary artery disease was investigated were included in the study. No limitations on publication sta-