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Extra cardiac anomalies (ECA) in 2020 subjects with congenital cardiovascular malformation (CCVM) and control: Etiological perspective

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Association of Congenital Cardiac Malformation with Extra Cardiac Anomalies is well documented. The main objective of this investigation was to analyze the frequency of extra-cardiac malformations and the proportion of chromosome aberrations among live-born infants with Congenital Cardiac Malformation (CCM) in an attempt to generate hypothetical theories of CCM genesis. The study results showed that out of 1010 Congenital Cardiac Malformation (CCM) compared to 10101 normal individuals, 288 were affected by extra cardiac anomalies (28.5%). Atrio-ventricular Septal Defect (AVSD) was found to be the most common CCM associated with ECA (72%) while Dextro-Transposition of Great arteries (D-TGA) was the lowest (8.7%). Syndromes were the commonest extra cardiac anomalies (37%) with congenital cardiac malformation. Complex heart defects such as Hypo-plastic Left Heart syndrome (HLHS) and Double Outlet Right Ventricle (DORV) were infrequently associated with CCM. Statistically significant associations were found between some CCM and certain systems. CCM with ECA associations and incidence of frequent chromosomal aberrations in Saudi population reflect importance of underlying genetic factors which may have pleiotropic effects and shared common pathways. The directive nature of these epidemiological associations is crucial for guidance of our efforts in the genetic and epigenetic fields. In this context molecular and bioinformatics approaches to uncover regulatory gene networks may provide insights needed to understand cardiogenesis and Congenital Cardiac Malformation etiology in human.

Biography

Abdullah A Alabdulgader is the Professor of Congenital Cardiology/Electrophysiology and also General Directorate of Health. He has completed his undergraduate in King Faisal University 1991. He is the Founder and General Director in Prince Sultan Cardiac Centre, General Director of King Fahad Hospital. He has received many local and international compliments and awards. A large number of Congratulatory Letters from the Presidents of the various Universities in Saudi and local educational and academic authorities has been received by him. He has got a Congratulatory Letter from the Royal Highness Prince Salman Ibn Abdulaziz and Crowned Prince of Saudi Arabia.

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