TRANSESOPHAGEAL ECHOCARDIOGRAPHY IN CONGENITAL HEART DISEASE SURGERY AND CARDIAC CATHETERIZATION INTERVENTIONAL PROCEDURES

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After The 1st Transesophageal echocardiogram (TEE) was performed in (1976), the pediatric TEE probe was introduced in (1989), this was followed by the evolution of TEE in Pediatric and Congenital Heart Disease (CHD) with smaller Probes and multiple planes of imaging, currently this tool is utilized in the operating theater and cardiac catheterization laboratories.  
TEE in CHD surgery is used to:
(Identify problems upon weaning from CPB, Assessment of surgical intervention, Revision of surgical repair, Influence on anesthetic & hemodynamic management and Plan & optimize post-operative care), TEE has a valid Pre-bypass & post-bypass impact at OR in CHD surgery. (The Predictors of major impact of TEE included: Younger age, Re-operation, Complex primary diagnosis, Complex outflow tract obstructions).
At the Cardiac catheterization for CHD interventional procedures TEE greatly improves the success and safety with various procedures including:
Closure of oval fossa atrial septal defects,
Occlusion of baffle fenestrations following total caval pulmonary connection
Closure of congenital ventricular septal defects
Blade atrial septectomy
In Summary
• TEE has a significant clinical impact at OR and cardiac catheterization laboratory CHD procedures.  
• Echocardiographer must have knowledge of normal intracardiac Anatomy as well as limitations & pitfalls.  
Certain considerations, limitations and controversies have to be observed while performing TEE for CHD.