

New State-of-the Art Echocardiography Machine for the Neonatal Unit at the Rotunda Hospital

Management of the cardiovascular system of preterm infants is challenging for many reasons. Clinical signs of haemodynamic compromise often appear late in the course of the disease. This has prompted an interest in exploring different methods of monitoring the haemodynamic status of the infant. Echocardiography uses ultrasound waves to assess the structure and function of the heart.

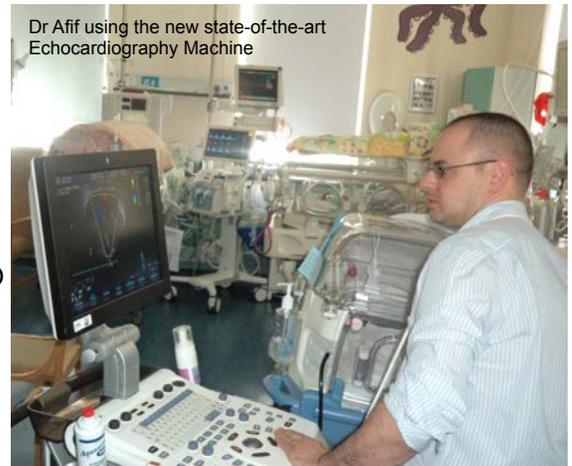
The role of echocardiography in the neonatal intensive care unit (NICU) has changed over the last few years. Previously, nearly all echocardiography studies in the NICU were performed by paediatric cardiologists to diagnose or monitor congenital heart disease and to screen for patent ductus arteriosus.

The use of targeted neonatal echocardiography (TnECHO) by neonatologists for the evaluation of the cardiovascular wellbeing is becoming the standard of care across many NICUs. The purpose of TnECHO is to provide physiological information in real time, in order to support clinical decision making. This approach is designed to enhance clinical judgment, provide a better understanding of active physiological processes and monitor

the response to treatment.

Combination of clinical examination and bedside echocardiography has been shown to improve clinical diagnosis and patient management. There is emerging evidence suggesting that the routine use of TnECHO in the Neonatal Unit leads to better identification of cardiovascular compromise and potentially improve short-term outcomes. In addition, it acts as a catalyst for promoting research into the cardiovascular system of the neonate.

The impact of each TnECHO evaluation on clinical practice can be divided into one of the following categories: Change in management: defined as the institution of a new therapeutic intervention as guided by the findings of the TnECHO and confirming clinical suspicion; Unexpected diagnosis: defined as a novel physiological insight not anticipated or suspected by clinical examination; Avoidance of a planned intervention: defined as stopping a planned therapeutic intervention (following clinical assessment) after the



Dr Afif using the new state-of-the-art Echocardiography Machine

findings of the TnECHO; Monitoring treatment response: defined as the use of TnECHO to either escalate or wean therapy already instituted.

Recently, the Friends of the Rotunda along with a generous donation from Irish Premature Babies, secured funding for a new state-of-the art echocardiography machine for the Neonatal Unit at the Rotunda Hospital. The new piece of equipment will provide a better way to care for our sick infants on a daily basis and provide a platform for conducting novel research in the field of neonatal cardiovascular medicine.

 *Handmade by a Volunteer of The Friends of the Rotunda*



Instructors: Deirdre McCormack (far left) and Martina Duffy (far Right) have just started to teach knitting to Gaisce Transition Year Award Students from Maryfield College, Dublin 9.
L - R Eilise O'Grady, Rebecca O'Hara, Elizabeth Thompson, Lucy Clarke and Emily Horan, pictured here with their premature baby sized hats for NICU.

Upcoming Fundraising Events

2nd June

2014 Flora Women's Mini Marathon
To register www.florawomensminimarathon.ie



5th June

Rotunda Hospital Golf Classic
Milltown Golf Club