

Research

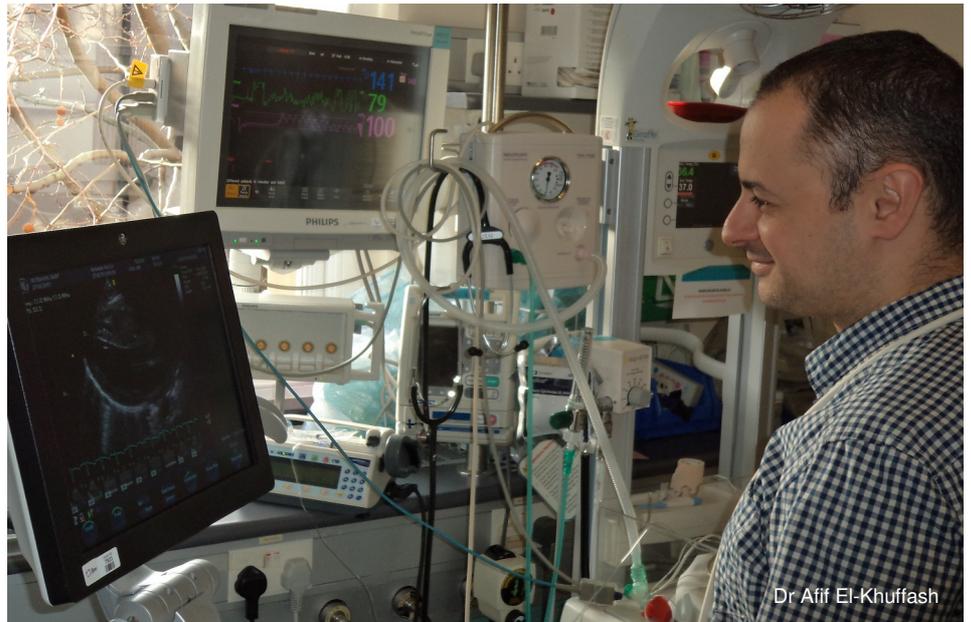
Neonatal Echocardiography Medicine

By Dr Afif El-Khuffash
Consultant Neonatologist

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 treatment response.

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 cardio-vascular compromise, potentially improving short-term outcomes. In addition, it acts as a catalyst for promoting research into



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the cardiovascular system of the Neonatal Unit. 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 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.

Fundraising & Events

1st June, Dublin
VHI Women's Mini Marathon

11th June, Dublin
Rotunda Golf Classic, Milltown Golf Club



13th, 14th June, Wicklow
Hell & Back Ireland's Toughest
Physical & Mental Endurance Challenge

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and Fundraise for the
Rotunda Hospital's
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The Friends of the Rotunda were chosen to take part in a **Tesco Parnell Street Community Fund** campaign alongside two other charities. Shoppers voted for their preferred charity with tokens.

The Friends received the largest number of votes and was recently awarded a cheque for €351.86 which will be used for Rotunda Research.

