



Screening of Echocardiography on Newborn at NMCHC Over 1 year

Dr Specialist PAT SOPHEAKTRA

Introduction

Echocardiography is an investigation that is being used increasingly on Newborn in NMCHC

There is some controversy as to whether this service can be provided safely and effectively by neonatologists or whether it should only be performed by pediatric cardiologist .

Aims

To describe the indications for an echocardiography , the yield and range of positive findings, the resulting changes in clinical management, Follow up, Transfer to specialize, and the reliability of echocardiography in the hands of neonatologists when it is performed on the newborn in NMCHC

Methods

Information about all echocardiography performed on the newborn was collected retrospectively. Indications for performing echocardiography, abnormal echographic findings, and any resulting changes in clinical management and follow up were determined. The concordance of findings in infants who underwent echocardiography performed by both a neonatologist and a pediatric cardiologist was described.

Results

A total of 3393 performed in 319 (9.4%) infants. Echocardiography identified structural cardiac abnormality and abnormal functions .

Echocardiography prompted a specific change in clinical management and flow up, Transfer to specialize, or Heart surgeon .

There was complete concordance between the two examinations. Some discrepancy was identified , but this did not prevent appropriate immediate clinical management.

Small ASD : 32 (10.03%)

PDA : 124 (38.877%)

PFO : 152 (47.64%)

Large ASD : 4 (0.12%)

Unic Ventricle : 1 (0.03%)

VSD : 2 (0.06%)

Complex cardiopathy : 4 (0.12%)

Heart Ultrasound	Salon Hospital (India)	NMCHC
Small ASD	9.1%	10.03%
PDA	10.6%	38.877%
PFO	6.1%	47.64%
Large ASD	3%	0.12%
Unic Ventricle	2%	0.03%
VSA	9.5%	0.06%
Complex Cardiopatlux	2%	0.12%

Conclusions

Echocardiography on the newborn in MNCHC has a high yield for the diagnosis of structural and functional cardiac abnormalities, often results in a change in clinical management, follow up and can be a-reliable tool in the hands of neonatologist.

Recommendation

All newborn should do echographs screening (brain and heart) includes high risk newborn or not , Term or Preterm, C-section or Normal vaginal delivery, Vacuum or Difficulty of delivery

- Can do when a baby was born after birth 48h .



បង្គុបបង្ការជាតិគាំពារមាតា និងទារក
មានបម្រើសេវាអេកូក្បាលទារក និងអេកូបេះដូខទារក
ឬគុមារ៖

១.អេកូ ក្បាលទារក

- ធ្វើចំពោះទារក កូនតូចៗ (ដែលប្រហោយមិនទាន់បិទជិត)
- មិនគ្រប់គីឡូ មិនគ្រប់ខែ ឬក្បាលទារកតូចពេក
- កូនកើតមកដោយការបូម ឬជប់ កូនកើតមកសន្លប់

អត្ថប្រយោជន៍

- រកមើលភាពមិនប្រក្រតីនៅក្នុងក្បាលទារក (Malformation)
- ការបង្ករោគ (Infection)
- ក្បាលធំ (Craniomegaly)
- វិបត្តិសរសៃឈាមក្នុងខួរក្បាលទារក (Neonatal Vascular Diseases)

២.អេកូ បេះដូខទារក ឬគុមារ

- ធ្វើចំពោះទារកមានអាយុ ២ថ្ងៃ រហូតដល់អាយុ ១៥ឆ្នាំ

អត្ថប្រយោជន៍

- រកមើលភាពមិនប្រក្រតីពីកំណើត
- ជំងឺបេះដូងពីកំណើត (ដែលត្រូវវះកាត់ភ្លាមៗ ឬព្យាបាលដោយប្រើរយៈពេលយូរ)
- ជំងឺសរសៃឈាមបេះដូងពីកំណើត
- ការរីកសរសៃឈាមដោយជំងឺផ្សេងៗ



References :

1. Abu-Harb M, Hey E, Wren C. Death in infancy from unrecognized congenital heart disease. *Arch Dis Child*. 1994 Jul; 71 (1):3-7.
2. Hoffman JI, Kaplan S. The incidence of congenital heart disease. *J Am Coll Cardiol*. 2002 Jun 19;39 (12): 1890-900.
3. Wren C, Reinhardt Z, Khawaja K. Twenty-year trends in diagnosis of life-threatening neonatal cardiovascular malformations. *Arch Dis Child Fetal Neonatal Ed*. 2008; 93 (1):F33-F35. DOI: 10.1136/adc.2007. 119032.
4. Richmond S, Wren C. Early diagnosis of congenital heart disease. *Semin Neonatol*. 2001 Feb;6(1):27-35.
5. Kuehl KS, Loffredo CA, Ferencz C. Failure to diagnose congenital heart disease in infancy. *Pediatrics*. 1999 Apr; 103 (4 Pt 1):743-7.
6. Abu-Harb M, Wyllie J, Hey E, Richmond S, Wren C. Presentation of obstructive left heart malformations in infancy. *Arch Dis Child Fetal Neonatal Ed*. 1994 Nov; 71 (3):F179-83.

7. Gandy GM. Examination of the neonate including gestational age assessment. In: Robertson NR, ed. Textbook of Neonatology. 2nd edn. Edinburgh: Churchill Livingstone, 1992.

Available online at: www.pediatricreview.in 220 | Page

8. Rudolph AM. The changes in the circulation after birth. Their importance in congenital heart disease. *Circulation*. 1970 Feb;41(2):343-59.

9. Renine JM. Examination of the newborn. In: Rennie JM, editor. Robertson's Textbook of Neonatology. 4th ed. Philadelphia: Churchill Livingstone; 2005. p. 249-66.

10. Poddar B, Basu S. Approach to a child with a heart murmur. *Indian J Pediatr*. 2004 Jan;71(1):63-6.

11. Ainsworth S, Wyllie JP, Wren C. Prevalence and clinical significance of cardiac murmurs in neonates. *Arch Dis Child Fetal Neonatal Ed*. 1999 Jan;80(1):F43-5.

12. Danilowicz DA, Rudolph AM, Hoffman JIE, Heymann M. Physiologic pressure differences between main and branch pulmonary arteries in infants. *Circulation* 1972;XLV:410-19.

THANK YOU