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DIAGNOSTIC ACCURACY OF ECHOCARDIOGRAPHIC PARAMETERS ON THE THIRD DAY OF LIFE IN PREDICTING SPONTANEOUS CLOSURE OF DUCTUS ARTERIOSUS IN PRETERM NEONATESPhyo Phyo Myint, Wai Lin Tun, Zin Mar Thin. *Myanmar*

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Background Patent ductus arteriosus (PDA) is a common problem in preterm very low birth weight neonates. While PDA is known to have negative impact on neonates, treatment of PDA has its own complications, and not all PDAs need treatment. Therefore, echocardiographic parameters which might help in the management of PDA will be useful for clinicians.

Objectives To study diagnostic accuracy of echocardiographic parameters on the third day of life in predicting spontaneous closure of ductus arteriosus in preterm very low birth weight neonates

Methods A hospital-based cross-sectional descriptive study was performed in Neonatal Intensive Care Unit (NICU) of 550-bedded Children Hospital, Mandalay, over one year period (from January, 2019 to December, 2019). A total of 63 preterm neonates with birth weight ≤ 1.5 kg and/or gestational age ≤ 32 weeks, who had patent ductus arteriosus were studied. Gestational age assessment was made by using the New Ballard Scoring System. On the third day of life, echocardiographic measurement of ductal diameter and LA/Ao ratio was done by the neonatologist. The measurements made by the neonatologist were reviewed and corrected if necessary by the pediatric cardiologist. Decision to treat PDA was made by the neonatologist based on the NICU protocol. On the tenth day of life, patent ductus arteriosus was re-assessed echocardiographically.

Results On the third day of life, most of the PDAs (67.6%) had ductal diameter < 1.6 mm. The number of PDAs with LA/Ao ratio < 1.5 and those with LA/Ao ratio ≥ 1.5 were almost equal (31 vs 32). On the tenth day of life, 47.6% of neonates with PDA had spontaneous ductal closure, 38.1% had persistent PDA and 14.3% had ductal closure after treatment. Spontaneous ductal closure was more commonly observed in PDAs with ductal diameter < 1.6 mm than those with ductal diameter ≥ 1.6 mm (61.3% vs 15.7%). There was a statistically significant association between ductal diameter and spontaneous ductal closure (p value = 0.001). The diagnostic accuracy of ductal diameter in predicting spontaneous ductal closure is 68%. In the neonates with LA/Ao ratio < 1.5 , 64.5% had spontaneous ductal closure on the tenth day of life. In those with LA/Ao ratio ≥ 1.5 , 31.2% had spontaneous ductal closure on the tenth day of life. There was a statistically significant association between LA/Ao ratio and spontaneous ductal closure on the tenth day of life (p value = 0.008). The diagnostic accuracy of LA/Ao ratio in predicting spontaneous ductal closure is 66%. In PDAs with ductal diameter ≥ 1.6 mm and LA/Ao ratio ≥ 1.5 , only 11% had spontaneous ductal closure. The diagnostic accuracy of ductal diameter and LA/Ao ratio in combination is 70%.

Conclusions In this study, ductal diameter and LA/Ao ratio on the third day of life were found to have acceptable diagnostic accuracy in predicting spontaneous ductal closure on the tenth

day of life. When ductal diameter and LA/Ao ratio were used in combination, diagnostic accuracy was found to improve marginally.

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THE IMPACT OF 100 DAYS OF COVID-19 LOCK-DOWN ON THE EMOTIONAL HEALTH OF SCHOOL CHILDREN IN AN URBAN INDIAN SETTINGJohn Cheri Mathews, Deepa Elizabeth Mathew, Natasha Susan John, Joe Johnson, Sanju George. *India*

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Background In response to the WHO recommended measures of physical and social distancing to mitigate person-to-person transmission, most countries decided to close schools as part of a physical distancing policy to slow transmission of COVID-19 and to ease the burden on health systems. Schools were closed in more than 160 countries by mid-July 2020 due to the COVID-19 pandemic. Public health measures taken to prevent the spread of the pandemic can potentially impact the mental health of children. Not much is known about the long-term impact of large-scale disease outbreaks on the mental health of children and adolescents.

Objectives To assess the prevalence and risk factors of childhood depression during the Covid-19 lock-down among school children.

Methods After 100 days of lock-down, a voluntary, anonymous survey questionnaire was sent by *WhatsApp* to parents of school-aged children (5–16 years) in Chennai. The Short Mood and Feelings questionnaire was employed as an objective screening tool to assess depression, with a score of 12 used as the cut-off which is recommended by the Child Outcomes Research Consortium, United Kingdom. All data were analyzed using Statistical Package for Social Science (SPSS, version 17) for Microsoft Windows. A chi-squared test was used for comparison between two attributes with OR 95% CI. Multiple logistic regression was used. A two-sided p value < 0.05 was considered statistically significant. Ethics approval was obtained for this research study.

Results There were 874 responses. Our survey revealed the incidence of childhood depression to be 13.7%, indicating that children are likely to be experiencing increasing depression exacerbated by the pandemic and the lock-down. Boys were less likely to be depressed than girls (OR 0.495, P value 0.000). Eleven- to 16-year-olds were more likely to be depressed than 5- to 10-year-old children (OR 1.519, P 0.035). Children who had more than 4 hours online education were more likely to have depression (OR 1.757, P = 0.037). Children who used a cell phone for online classes were more likely to have depression compared to other devices, such as tabs or laptops (OR 2.142, P 0.000). Children who slept less than 8 hours a day were more likely to have depression (OR 2.441, P 0.000). Children who either did not sleep in the afternoon or slept less than 1 hour were less likely to have depression (OR 0.522, P 0.010). Children who were interacting with family over 1 hour per day were less likely to have depression (OR 2.985, P 0.000).

Conclusions Overzealous online education, lack of adequate sleep and failure to spend quality time with family and can negatively impact the mental health of school children. Public health policy makers and health care professionals need to acknowledge that pandemics (especially when associated with

lock-down) can potentially negatively impact the psychological well-being of school-age children. In the event of similar future pandemics, strategies need to be in place to safeguard the psychological well-being of individuals by offering them timely and appropriate psychological support, as well as taking the appropriate steps in the effective management of those already affected psychologically.

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QUICK, STAB ME IN THE THIGH! OOPS I'VE FORGOTTEN MY EPIPEN-A PEER PILOT SURVEY OF TEENAGERS' PERSPECTIVES

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Background Anaphylaxis is a severe life-threatening allergic reaction; the treatment of choice is adrenaline(epinephrine). The most common UK adrenaline auto-injector is the EpiPen. Primary school children (under 11 years) will have this administered by a parent/carer or teacher if in school. Secondary school aged children (11–18) are supposed to carry their EpiPens themselves for self-administration, however many do not. **Objectives** Pilot survey exploring the reasons that secondary school aged children do not carry their EpiPens and rating suggestions for how to improve this.

Methods A questionnaire was devised exploring these issues asking:

1. Do they have an EpiPen?
2. Their knowledge of EpiPens? (sliding bar range: 0 bad to 10 good)
3. Were they concerned about adolescents not carrying their EpiPens?
4. Which of the following did they think were factors for teenagers not carrying their EpiPens? (Multiple responses accepted).
 - Nowhere to put them
 - Forgotten
 - Expired
 - Don't expect them to be needed
 - Don't realise they have to
 - Other (asked to specify)
5. Rate the following in effectiveness to increase teenagers carrying EpiPens; Smaller Pens; Better education; Better ways to carry them(Likert scale: 1 not good to 5 ideal).

The questionnaire was approved by the school as part of a sixth form Welsh Baccalaureate project. It was sent digitally as a convenience sample to members of the sixth form, Girl Guides and an adult from each family to complete via Survey-Monkey®. Comparative statistical tests comparing adults and teenagers results were performed($p < 0.05$ taken as significant). **Results** The survey was sent to 82 teenagers; there were 61 respondents, 35 teenagers and 26 adults.

Q1) Only 2 children had EpiPens.

Q2) EpiPen knowledge: Overall mean score 4.4 (SD 2.8). Teenagers mean 4.0 (SD 2.5); adults mean 5.0 (SD 3.1): students t -test t -value 1.43 $p = 0.079$.

Q3) Concerned about EpiPen carriage: Overall yes 47 (77.1%), no 3(4.9%), don't know 11(18.0%). Teenagers yes 30(85.7%), no 1(2.9%), don't know 4(11.4%): adults yes 17 (65.4%), no 2(7.7%), don't know 7(26.9%). Chi-square 1.1132 $p = 0.29$.

Q4)

Factors for teenagers not carrying their EpiPens	n(%)
Nowhere to put them	27(44%)
Forgotten	37(61%)
Expired	7(11%)
Not expected to be needed	45(74%)
Don't realise they have to	17(28%)
Other	9(15%)

Q5)

Methods to improve carriage	Mean rating(1–5)			Mann-Whitney U value	P value
	Overall score	Adults	Teenagers		
Smaller Pens	3.5	3.6	3.5	418.5	0.84
Better education	4.1	3.9	4.3	359.0	0.24
Better ways to carry them	3.7	3.6	3.9	376.5	0.36

Conclusions There was a wide range of self-reported knowledge scores about EpiPens and most respondents were concerned that EpiPens were often not carried. They felt the reasons for this included; not expecting them to be needed, forgetting them and not having anywhere to carry them due to their size. Almost all respondents felt that education and an improved, smaller design for both EpiPens and their carry-cases would increase carriage rates. In this pilot survey no differences between adults and children were demonstrated.

Sixth form student projects may enable teenagers' perspectives on medical topics to be assessed through a non-threatening peer evaluation. Post-Covid this peer based digital technique may warrant further exploration.

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ULTRASOUND GUIDED FLUID RESUSCITATION IN PEDIATRIC SEPTIC SHOCK: A RANDOMIZED CONTROLLED TRIAL

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Background Over-zealous fluid resuscitation in septic shock can lead to fluid overload and its associated poor outcomes. Hence we need dynamic markers of fluid responsiveness to better guide fluid therapy in children with septic shock. Ultrasound parameters are an option available to PICU physicians for the same.

Objectives To evaluate the role of Ultrasound in reducing the incidence of fluid overload in children with septic shock. Fluid overload was defined as Cumulative fluid balance percentage (CFB%) $> 10\%$. The primary outcome was a reduction in the number of patients with fluid overload on day 3 of admission. Secondary outcomes were resuscitation and shock reversal time, total fluid bolus, fluid overload on day 1, use of Furosemide and inotropes, the occurrence of AKI, the requirement of mechanical ventilation, length of stay, and mortality.

Methods This is a prospective randomized controlled superior trial, conducted in the PICU of a government-aided