

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



МАТЕРІАЛИ

**105-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького персоналу
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ
присвяченої 80-річчю БДМУ
05, 07, 12 лютого 2024 року**

Конференція внесена до Реєстру заходів безперервного професійного розвитку,
які проводитимуться у 2024 році № 3700679

Чернівці – 2024

УДК 001:378.12(477.85)

ББК 72:74.58

М 34

Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

ББК 72:74.58

У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

Загальна редакція: професор Геруш І.В., професорка Грицюк М.І., професор Безрук В.В.

Наукові рецензенти:

професор Братенко М.К.

професор Булик Р.Є.

професор Гринчук Ф.В.

професор Давиденко І.С.

професор Дейнека С.Є.

професорка Денисенко О.І.

професор Заморський І.І.

професорка Колоскова О.К.

професор Коновчук В.М.

професор Пенішкевич Я.І.

професорка Хухліна О.С.

професор Слободян О.М.

професорка Ткачук С.С.

професорка Годоріко Л.Д.

професор Юзько О.М.

професорка Годованець О.І.

ISBN 978-617-519-077-7

© Буковинський державний медичний
університет, 2024

postoperative period, it is necessary carefully to monitor the condition and function of the most important organs and systems, since surgery and anesthesia lead to corresponding pathophysiological changes in the body.

Babintseva A.G.

INTERNATIONAL GUIDELINES AND PRACTICAL EXPERIENCE IN NEONATAL LUNG ULTRASOUND

*Department of Pediatrics, Neonatology and Perinatal Medicine
Bukovinian State Medical University*

Introduction. Modern lung ultrasound (LUS) is mainly applied not only in critical care, emergency medicine, and trauma surgery, but also in pulmonary and internal medicine. Many international and national authors have produced several studies on the application of LUS to neonatal practice. One of the modern International evidence-based guidelines on Point of Care Ultrasound (POCUS) for critically ill neonates and children issued by the POCUS Working Group of the European Society of Paediatric and Neonatal Intensive Care (ESPNIC) [Syngh Y. et al., 2020].

Meconium aspiration syndrome (MAS) is one of the conditions in which the integration between clinical history, symptomatology, and ultrasound findings is of utmost importance for a correct diagnosis and treatment. It is a condition that occurs especially in term infants. After inhalation of meconium the fetus/newborn can suffer from hypoxia, acidemia, and infection, secondary to airway obstruction or surfactant dysfunction.

The aim of the study. We would like to present three clinical cases of neonatal MAS with different treatment tactic and demonstrate how LUS can help practical neonatologists to improve the intensive care with final positive results.

Material and methods. Both lungs were scanned in 3 zones each (upper anterior, lower anterior, and lateral) with indication of the basic LUS patterns [Raimondini F. et al, 2021]. The LUS was assigned for each zone using a validated scoring system based on 4 patterns and 0-3 point [De Martino L. et al. 2018].

Results. Case 1. The newborn was born on 39 weeks from I pregnancy and I delivery by cesarean section (fetus distress, clinical narrow pelvis, meconium amniotic fluid). The Apgar score was 4-5-6-6-6 points. The ventilation support by T-system and meconium aspiration from respiratory tract was performed. The newborn's state was severe with negative changes. The respiratory support was provided by HFOV. On 1st DOL the LUS demonstrated subpleural consolidations and compact B-lines on the both lungs (R1 – 3, R2 – 2, R3 – 2, L1 – 2, L2 – 2, L3 – 3). The MAS was confirmed. The synthetic surfactant was installed to newborn.

Case 2. The newborn was born on 40 weeks from I pregnancy and I delivery by cesarean section (fetus distress, meconium amniotic fluid). The Apgar score was 3-4-5-5-5 points. The primary respiratory support by T-system and meconium aspiration from respiratory tract was performed also. The signs of multiple organ dysfunction were diagnosed. On 3rd DOL the LUS demonstrated A-lines and compact B-lines on the right lung (R1 – 0, R2 – 1, R3 – 1); compact B-lines, subpleural consolidations and air bronchograms on the left lung (L1 – 3, L2 – 2, L3 – 3). The post aspiration pneumonia was diagnosed, the treatment was corrected.

Case 3. The newborn was born on 40 weeks from II pregnancy and II delivery (fetus distress in second period of the delivery, meconium amniotic fluid). The Apgar score was 5-6-7-7-7 points. The ventilation support by T-system was performed, nCPAP was continued. During first hours of life the newborn's state was getting severe, the respiratory failure was increased. The LUS demonstrated subpleural consolidations, compact B-lines and air bronchograms on the both lungs (R1 – 2, R2 – 1, R3 – 3, L1 – 2, L2 – 1, L3 – 3). The MAS was confirmed. The invasive mechanical ventilation was begun.

Conclusions. LUS can be a useful basic tool to guide both diagnostic and therapeutic decisions for neonates with different lung disorders, including MAS, in the NICU.