Tài liệu dành cho nhân viên y tế

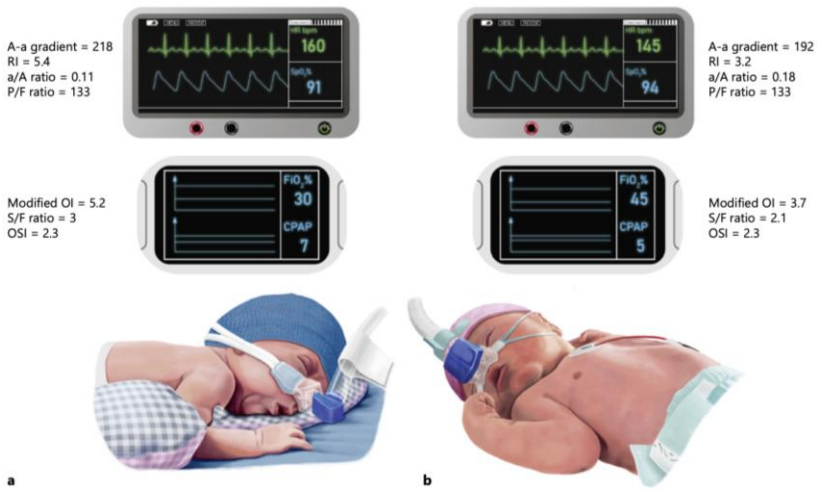
Điều trị RDS theo hướng cá thể hóa

BSCK2. Nguyễn Thanh Thiện

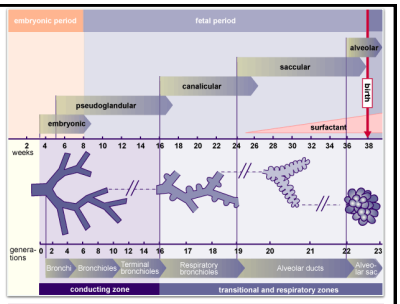
Khoa HSSS - BV Nhi Đồng 2

VN-NP-ABV-SUR-SD-HCP-000013-11-01-2028

Vì sao cần cá thể hoá điều trị?



De Luca D et al, *Neonatology* 2021;118(2):127-138



- Mức độ trưởng thành phổi
- Mức độ thiếu surfactant
- Yếu tố bệnh nền
  - Thân nhiệt
  - Huyết động
  - Lượng Hb
  - Nhiễm khuẩn
- Mức độ hỗ trợ hô hấp

Tiếp cận cá thể hoá

Hỗ trợ hô hấp ban đầu
- FiO_2 bao nhiêu
- Phương thức nào

Liệu pháp surfactant
- Trẻ nào cần surfactant
- Thời điểm dùng surfactant

Vai trò của POCUS

Cá thể hoá = Đánh giá → Ra quyết định → Theo dõi → Điều chỉnh

Tối đa hoá khả năng sống
Giảm thiểu tổn thương phổi

Đánh giá bệnh nhân và ổn định ban đầu

TRƯỚC SINH
- Tuổi thai
- Tình trạng tăng trưởng thai
- Corticosteroid tiền sản
- Tình trạng nước ối

NGAY SAU SINH
- Khả năng tự thở
- Mức độ suy hô hấp: nhịp thở, công thở, SpO_2
- Đáp ứng với hỗ trợ hô hấp
- Tình trạng huyết động

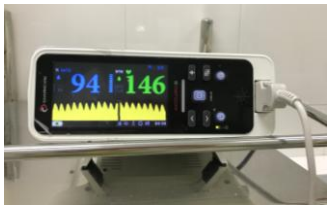
ỔN ĐỊNH
- Hỗ trợ NRS sớm (tự thở)
- Đặt NKQ khi hồi sức không hiệu quả

Không trì hoãn hỗ trợ hô hấp để hoàn tất chẩn đoán

Nồng độ oxy

FiO_2 ban đầu trong hồi sức phòng sinh → ***điều chỉnh*** theo SpO_2 mục tiêu

Tuổi thai	FiO_2
< 29	60%
29 - 31	≥ 30%
≥32	21%



Bảng SpO_2 mục tiêu	
2 phút	65-70%
3 phút	70-75%
4 phút	75-80%
5 phút	80-85%
10 phút	85-95%

Hồi sức tại phòng sinh bắt đầu với **FiO_2 cao hơn ở trẻ nhỏ hơn**

→ ít cần ép tim ngoài lồng ngực và adrenaline hơn, đạt độ bão hòa oxy tối ưu nhanh hơn

FiO_2 tối thiểu → SpO_2 mục tiêu tại NICU 90-94%

Sweet DG et al, *Neonatology* 2026;123(4):514-539

JAMA

QUESTION Does initiating resuscitation of extremely preterm newborns with a higher level of fraction of inspired oxygen (FIO_2; 0.6) reduce risk of death or brain injury compared with a lower FIO_2 (0.3)?

CONCLUSION There was no difference in risk of brain injury or death after initiating resuscitation in newborns with an FIO_2 of 0.6 vs 0.3.

POPULATION

797 Females
672 Males

Newborns born at 23 to 28 weeks' gestation who required respiratory support at birth

LOCATION

31 Maternity hospitals in 6 countries (Australia, India, Malaysia, Singapore, Spain, and the US)

INTERVENTION

1469 Newborns randomized
1423 Newborns analyzed

728
FIO_2 of 0.6
FIO_2 at 0.6 maintained for at least 5 minutes and then adjusted using oxygen saturation targets

741
FIO_2 of 0.3
FIO_2 at 0.3 maintained for at least 5 minutes and then adjusted using oxygen saturation targets

PRIMARY OUTCOME

Death and/or brain injury at 36 weeks' corrected gestational age

FINDINGS

Rate of death and/or brain injury

FIO_2 of 0.6
330 of 703 newborns
46.9%

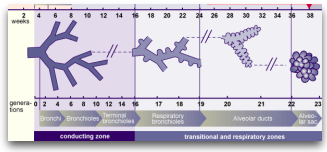
FIO_2 of 0.3
344 of 720 newborns
47.8%

There was no difference in risk between the groups:
Relative risk, 0.98 (95% CI, 0.89 to 1.09)

© AMA

Oei JL, Kirby A, Travadi J, et al; TORPIDO30/60 Collaborative Group. Targeted oxygen for initial resuscitation of preterm infants: the TORPIDO 30/60 randomized clinical trial. *JAMA*. Published online December 10, 2025. doi:10.1001/jama.2025.23327

Phương thức hỗ trợ hô hấp



Nguy cơ thấp
- > 1.5 kg
- > 32 tuần
- Steroid tiền sản
- Không viêm màng ối

HFNC/CPAP

Nguy cơ trung bình
- 1 - 1.5 kg
- 28 - 32 tuần
- Steroid tiền sản
- > 32 tuần/ 1.5 kg, có dấu suy hô hấp rõ

CPAP

Nguy cơ cao
- < 1 kg
- < 28 tuần
- Cần PPV ở phòng sinh
- RDS nặng
- Không steroid tiền sản
- Có viêm màng ối

CPAP/NIPPV

Theo dõi sát, sử dụng các thang điểm*
Điều chỉnh áp lực, FiO_2 và lưu lượng

Nâng bậc hỗ trợ nếu thất bại với phương thức ban đầu

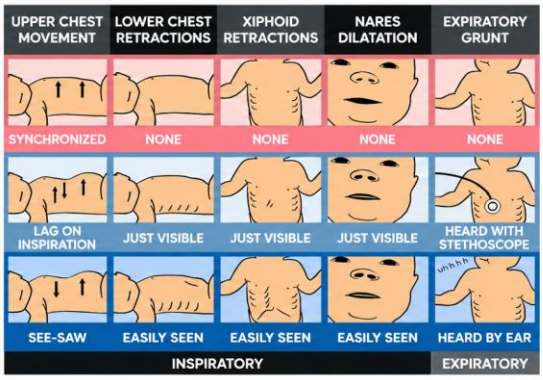
(*) Silverman-Andersen, Downes

Anne RP, Murki S, *Indian J Pediatr*. 2021;88(7):670-678

Downes Scores

	RESPIRATORY RATE (BPM)	CYANOSIS	RETRACTIONS	GRUNTING	AIR ENTRY
GRADE 0	<60	NONE	NONE	NONE	CLEAR
GRADE 1	60-80	IN ROOM AIR	MILD	AUDIBLE WITH STETHOSCOPE	DELAYED OR DECREASED
GRADE 2	>80	WITH 40% OXYGEN	MODERATE TO SEVERE	AUDIBLE WITHOUT STETHOSCOPE	BARELY AUDIBLE

Silverman Andersen Score



_____ + _____ + _____ + _____ + _____ = TOTAL

_____ + _____ + _____ + _____ + _____ = TOTAL

1-3: suy hô hấp nhẹ

4-6: suy hô hấp trung bình

≥ 7: suy hô hấp nặng

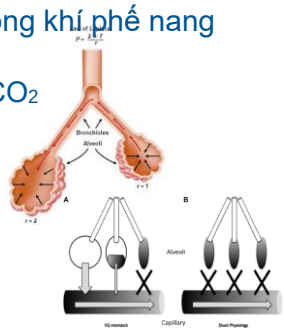
Ekhaguere OA et al, *Front Pediatr*. 2022;10:961509

Thiếu surfactant

- Xẹp phổi
  - Bất xứng V/Q, shunt

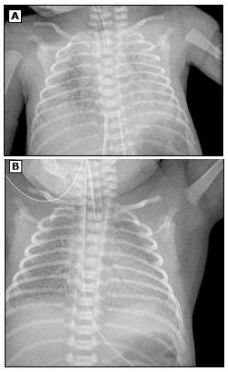
    → thiếu O_2
  - ↓ thông khí phế nang

    → ứ CO_2



Adapted from Sweet DG et al. Neonatology 2023;120:3-23; Nelson Textbook of Pediatrics, 22nd ed

- Biểu hiện trong vòng 6 giờ sau sinh
- Suy hô hấp:
  - Thở nhanh, thở chậm, ngưng thở
  - Tăng công hô hấp: phập phồng cánh mũi, co lõm ngực
  - Thở rên
  - Tím, nhu cầu oxy tăng
- Phế âm nghe kém

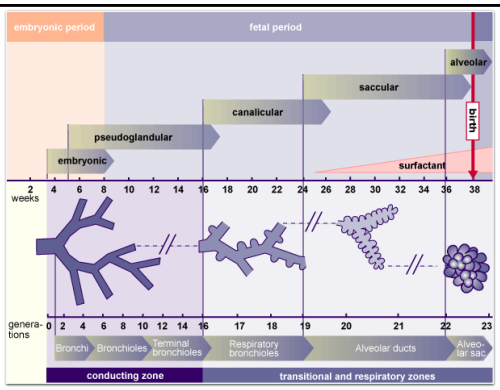


CHỦ QUAN **DẤU HIỆU MUỘN**

CHẨN ĐOÁN XÁC ĐỊNH?

SURFACTANT?

Liệu pháp surfactant



- Thiếu surfactant nguyên phát
- Thiếu surfactant thứ phát
- Can thiệp sớm (trước khi có tổn thương phổi)
- Sử dụng surfactant muộn: RDS tiến triển đầy đủ
  - Tổn thương phế nang-đường thở
  - Các khoang khí biến dạng, chứa các chất ức chế - bất hoạt surfactant

→ hiệu quả điều trị giảm

Sweet DG et al, *Neonatology* 2026;123(4):514-539

N = 297

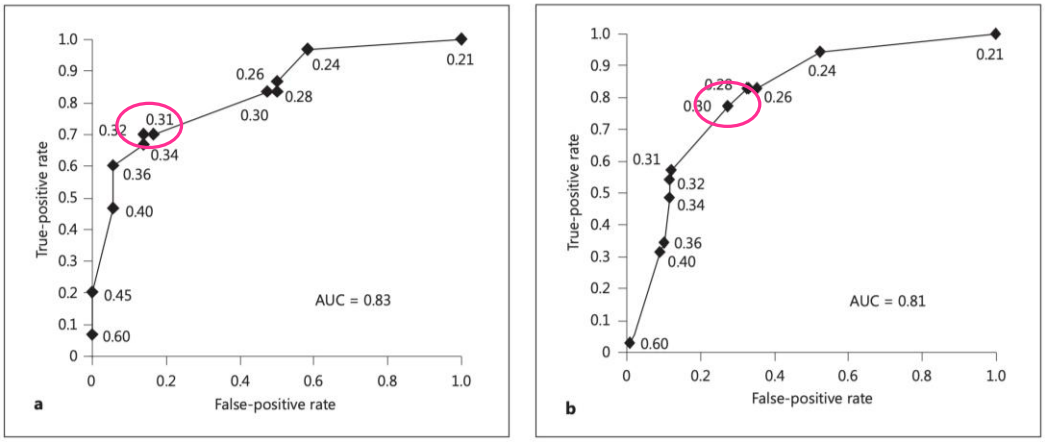
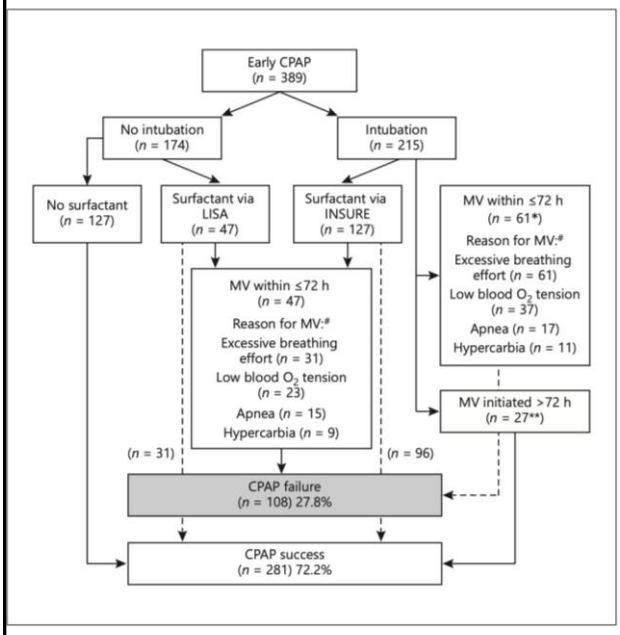


Fig. 1. Prediction of CPAP failure with FiO_2 in early life. ROCs plotting the true-positive (sensitivity) against the false-positive rate (1 – specificity) for prediction of CPAP failure with FiO_2, using the highest value in the first 2 h (25–28 weeks) or 6 h (29–32 weeks). **a** 25–28 weeks' gestation. **b** 29–32 weeks' gestation. Each data point represents the true- and false-positive rates for prediction of CPAP failure at a given threshold value of FiO_2 (shown on the graph). The curvilinearity of the relationship and the area under the curve (AUC) provide an indication of the predictive ability of FiO_2 in identifying CPAP failure. The area under the curve is shown in each panel; a value of 0.5 would indicate no predictive power, and a value of 1.0 perfect prediction.

Dargaville PA et al, *Neonatology* 2013;104(1):8-14



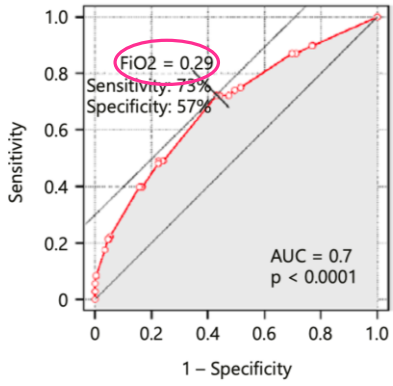


Fig. 2. ROC curve for prognosing CPAP failure according to highest FiO_2 level in the second hour of life. The cutoff point corresponds to the highest specificity and sensitivity values.

Gulczyńska E et al, *Neonatology* 2019; 116 (2): 171–178

Received: 18 February 2021 | Revised: 11 September 2021 | Accepted: 11 September 2021
DOI: 10.1002/ppul.25678

ORIGINAL ARTICLE: NEONATAL LUNG DISEASE

WILEY

Early nasal continuous positive airway pressure failure prediction in preterm infants less than 32 weeks gestational age suffering from respiratory distress syndrome

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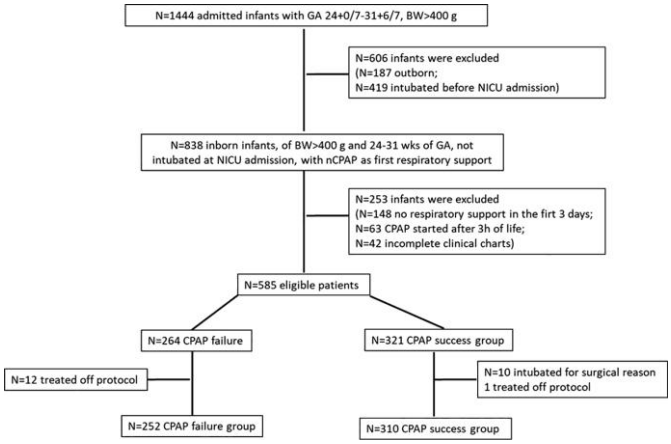
Abstract

Background: Early continuous positive airway pressure (CPAP) and surfactant replacement are effective treatments for neonatal respiratory distress syndrome (RDS). CPAP is the first line in preterm infants needing respiratory support, with surfactant replacement in case of CPAP failure (CPAP-F).

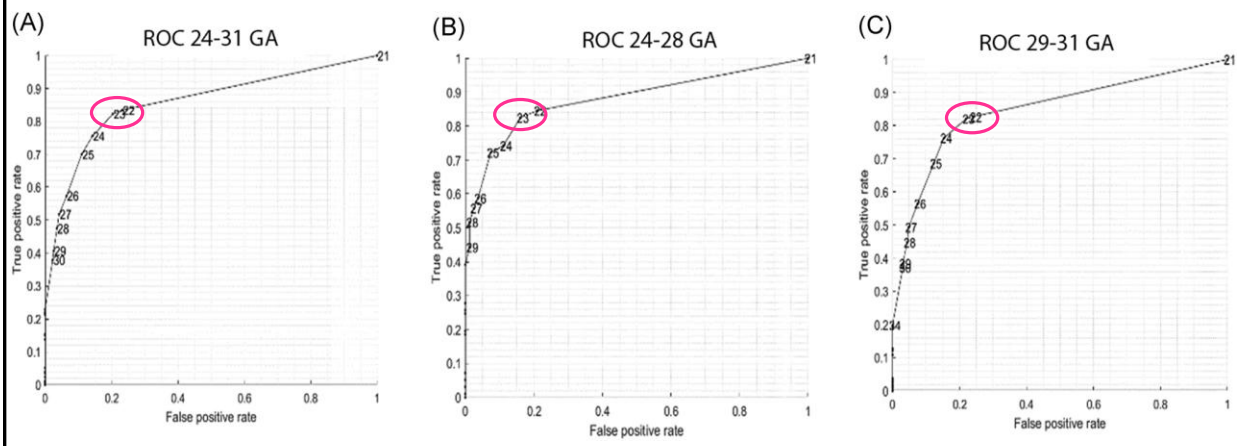
Objectives: To analyze incidence and factors associated with CPAP-F in preterm infants with RDS.

Design, Setting and Patients: Single-center retrospective database analysis (2004–2017) of inborn infants, gestational age (GA) 24+0/7–31+6/7 weeks, not intubated on admission to the neonatal intensive care unit, managed with CPAP. CPAP-F was defined as intubation and surfactant administration in the first 72 h of life; CPAP success (CPAP-S) was CPAP alone without need for additional RDS treatments. Demographic, respiratory, and clinical data associated with CPAP-F were studied using logistic regression analysis.

Results: A total of 562 infants met the inclusion criteria; 252 (44.8%) were CPAP-F and 310 (55.2%) were CPAP-S. The CPAP-F, compared to CPAP-S group, had lower GA and birth weight, and were less likely to receive antenatal steroids or to be vaginal births. Logistic regression showed that the fraction of inspired oxygen (FiO_2) ≥ 0.23 between 180 and 240 min of life (FiO_2 180–240 min) was the strongest factor associated with CPAP-F (odds ratio: 16.01 [95% confidence interval: 10.34–24.81]).



Dell'Orto et al, *Pediatr Pulmonol.* 2021; 56(12):3879-3886



ROC curves for CPAP-F prediction between 180 and 240 min of life
ROCs curve plots sensitivity and 1-specificity for FiO2 between 180 and 240 min of life
FiO2 threshold was noted on the curve.
(A)Overall population sensitivity 84%, and specificity 80%
(B)24-28 weeks' GA, sensitivity 88% and specificity 84%
(C)29-31 weeks' GA sensitivity 82% and specificity 79%

Dell'Orto et al, *Pediatr Pulmonol.* 2021; 56(12):3879-3886

Nội dung	Khuyến cáo
Điều trị surfactant	Surfactant nên được chỉ định sớm trong diễn tiến bệnh, khi đang hỗ trợ hô hấp không xâm lấn **(A1)** Cân nhắc dự phòng chọn lọc trong giờ đầu sau sinh cho trẻ <28 tuần có dấu hiệu sớm của RDS sau khi ổn định **(B2)** Đối với trẻ >28 tuần, nên cho surfactant khi RDS diễn tiến nặng hơn (A1)
Ngưỡng FiO_2 để điều trị surfactant	Phác đồ đề xuất là sử dụng surfactant cho trẻ đang hỗ trợ hô hấp không xâm lấn với áp lực đường thở trung bình (MAP) ≥6 cmH_2O, FiO_2 ≥0.3, hoặc khi siêu âm phổi gợi ý nhu cầu surfactant (A1)
Surfactant cho trẻ cần đặt NKQ	Nếu trẻ non <32 tuần tuổi thai cần đặt nội khí quản để ổn định, nên cho surfactant **càng sớm càng tốt (A1)**
Liều lặp lại	Đánh giá lâm sàng, công thở, mức độ cần hỗ trợ hô hấp (MAP, FiO_2), X-quang phổi, siêu âm phổi

Sweet DG et al, *Neonatology* 2026;123(4):514-539

Article | Published: 12 April 2024

Comparison of efficacy between beractant and poractant alfa in respiratory distress syndrome among preterm infants (28–33^{+6} weeks gestational age) using the less invasive surfactant administration (LISA) technique: A randomized controlled trial

Ashadur Zamal, Md Habibullah Sk, Bijan Saha ✉ & Avijit Hazra

Journal of Perinatology **45**, 823–829 (2025) | Cite this article

Objective: Exogenous surfactant therapy is vital in managing respiratory distress syndrome (RDS) in preterm infants, with less invasive surfactant administration (LISA) gaining popularity. This study aimed to assess the efficacy and short-term outcomes of LISA using beractant and poractant alfa.
Study Design: In a randomized controlled trial , we enrolled preterm infants (28-33$_{+6}$ weeks) with RDS requiring surfactant. LISA was employed, with beractant at 100 mg/kg or poractant-alfa at 200 mg/kg.
Primary outcome was the need for intubation within 72 hours.
Results: Among 120 infants, 3.3% in both groups required intubation within 72 hours (p value 1.00, 95% CI 0.14 - 6.86). No significant differences in secondary outcomes were noted, except a trend towards increased necrotizing enterocolitis with beractant . Beractant was significantly more economical.
Conclusion: Beractant and poractant-alfa exhibit similar efficacy in LISA for preterm infants with RDS. Economic considerations, especially in LMICs, favour beractant.
The trial is registered in the clinical trial registry of India (CTRI/2023/03/050375).

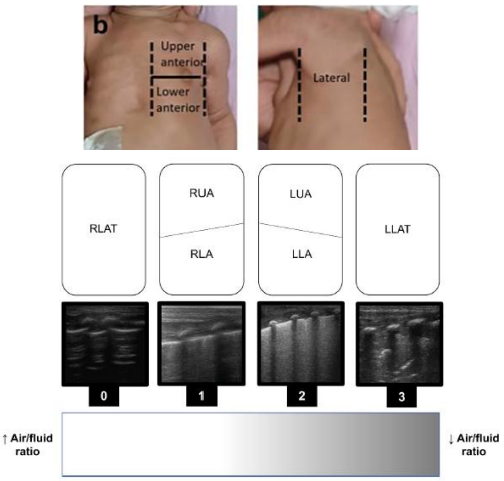
Table 2
Primary and secondary outcome measure

	Beractant (n = 60)	Poractant-alfa (n = 60)	p value	Relative risk (95% confidence interval)
Need for intubation in first 72 hr of life [a]	2 (3.3)	2(3.3)	1.00	1.00 (0.14–6.86)
Air Leaks [a]	2(3.33%)	1(1.67%)	1.00	2.0 (0.18–21.47)
Laryngoscopy attempt > 1 [a]	4 (6.6)	5 (8.3)	0.877	0.80 (0.22–2.83)
Number of Surfactant Doses > 1 [a]	11 (18.3)	9 (15.0)	0.753	1.22 (0.54–2.73)
Surfactant Reflux (ml) [b]	0.61 ± 0.22	0.30 ± 0.20	0.656	
Surfactant Cost (Rupees) [b]	14322.1 ± 4624.98	25208.9 ± 6822.64	< 0.001	
Hemodynamically significant patent ductus arteriosus required medical treatment [b]	18(30%)	18(30%)	1.00	1.00(0.57–1.73)
Culture positive sepsis [a]	7(11.67%)	6(10%)	1.00	1.17 (0.41–3.27)
Intraventricular hemorrhage (> Grade 2) [a]	3(5%)	5(8.33)	0.752	0.60 (0.15–2.39)
Necrotizing enterocolitis (> stage 2) [a]	6(10)	1(1.67)	0.114	6.0 (0.74–48.34)
Retinopathy of prematurity required intervention [a]	6(10%)	5(8.33)	1.00	1.20 (0.38–3.72)

Data are presented as:
[a] n (%)
[b] Mean(SD)

Ashadur Zamal et al, Comparison of efficacy between beractant and poractant alfa in respiratory distress syndrome among preterm infants (28-33+6 weeks gestational age) using the less invasive surfactant administration (LISA) technique: A randomized controlled trial, Journal of Perinatology volume 45, pages823–829 (2025)

Siêu âm phổi

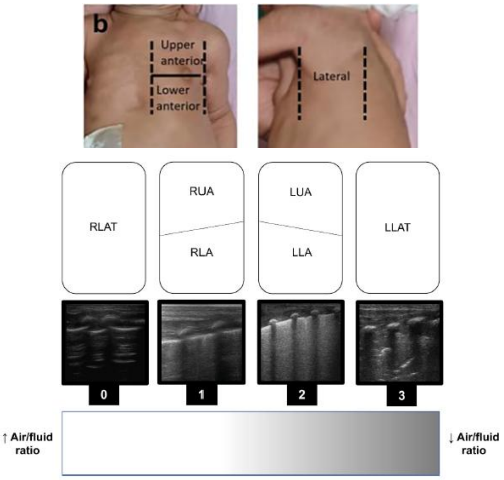


RLAT: vùng bên phổi P
RUA: vùng trước trên phổi P
RLA: vùng trước dưới phổi P
LUA: vùng trước trên phổi T
LLA: vùng trước dưới phổi T
LLAT: vùng bên phổi T

Điểm	Kiểu hình	Đặc điểm	Ý nghĩa
0	Phổi thông khí bình thường	Chỉ có A lines	Phổi chứa nhiều khí nhất
1	Hình ảnh phế nang - mô kẽ	Có ≥3 B-lines, phân bố cách nhau rõ ràng	Giảm lượng khí, tăng dịch mô kẽ
2	Hình ảnh phế nang - mô kẽ nặng	Các đường B dày đặc, hội tụ hoặc hòa nhập với nhau ± đông đặc dưới màng phổi ≤1 cm	Lượng khí giảm rõ, dịch phổi tăng nhiều
3	Đông đặc phổi lan rộng	Vùng dưới màng phổi giảm âm hoặc có cấu trúc giống mô gan, kích thước >1 cm, bờ không đều ± các vùng giảm âm và tăng âm xen kẽ, tạo hình ảnh khí phế quản đồ	Lượng khí rất ít, nhu mô phổi gần như bị thay thế bởi dịch hoặc mô đông đặc

Danielle De Luca, et al. *Seminars in Fetal and Neonatal Medicine* 28 (2023) 101494

Siêu âm phổi



RLAT: vùng bên phổi P
RUA: vùng trước trên phổi P
RLA: vùng trước dưới phổi P
LLAT: vùng bên phổi T
LUA: vùng trước trên phổi T
LLA: vùng trước dưới phổi T

Ở trẻ sinh non RDS đang được hỗ trợ CPAP, điểm LUS từ 6-8 trong những giờ đầu sau sinh có giá trị dự đoán rất cao về nhu cầu sử dụng surfactant, với:

- Diện tích dưới đường cong ROC (AUC): 0,952 (KTC 95%: 0,951–0,953; $p < 0,001$)
- Độ nhạy khoảng 85%
- Độ đặc hiệu khoảng 93%

Danielle De Luca, et al. *Seminars in Fetal and Neonatal Medicine* 28 (2023) 101494

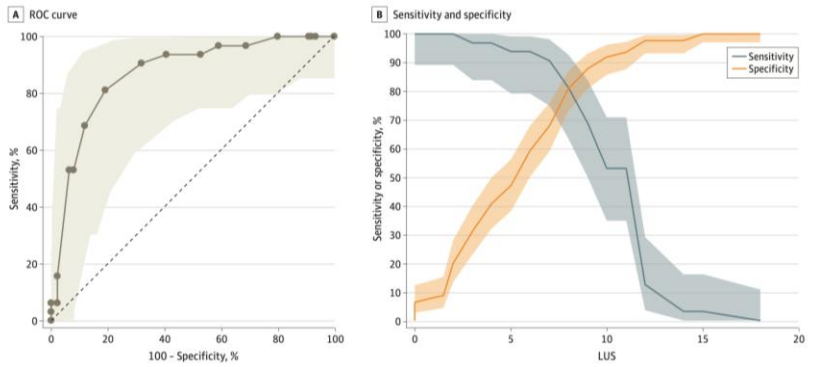
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Original Investigation | Pediatrics

Quantitative Lung Ultrasonography to Guide Surfactant Therapy in Neonates Born Late Preterm and Later

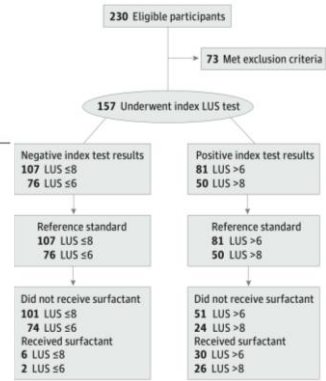
Daniele De Luca, MD, PhD; Luca Bonadies, MD, PhD; Almudena Alonso-Ojembarrena, MD, PhD; Diletta Martino, MD; Irene Gutierrez-Rosa, MD; Barbara Loi, MD; Reedhi Dasani, BSc; Letizia Capasso, MD; Eugenio Baraldi, MD; Alexis Davis, MD, MS; Francesco Raimondi, MD, PhD

Figure 2. Receiver Operating Characteristic (ROC) Analysis for the Whole Population



A, The ROC curve and 95% CI (shading) corresponded to an area under the curve of 0.87 (95% CI, 0.81-0.92). Diagonal line represents the chance line, corresponding to an area under the curve of 0.5. B, The crossing point is at an LUS score of 8. Shading indicates 95% CIs.

Figure 1. STARD Diagram



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Các chỉ số đánh giá oxy hoá

Xâm lấn (KMĐM)	Không xâm lấn
PaO_2/ FiO_2 ratio	RSS = MAP x FiO_2
OI = (MAP x FiO_2)/ PaO_2	OSI = (MAP x FiO_2)/ SpO_2

OI: oxygen index

RSS: respiratory severity score

OSI: oxygen saturation index

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Article in Press

Original Article

Oxygen Saturation Index as a Predictor of Surfactant Requirement in Neonates with Respiratory Distress Syndrome: A Prospective Observational Study

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ABSTRACT

Objectives: The study aimed to evaluate the predictive value of the oxygen saturation index (OSI) for surfactant requirement in neonates with respiratory distress syndrome (RDS) and to determine optimal cutoff values for guiding surfactant therapy.

Material and Methods: This prospective observational study was conducted at the neonatal intensive care unit (NICU) of a tertiary care teaching hospital in Gujarat, India, over 18 months (IEC Approval No: SVIEC/ON/Medi/BNPG/22/DEC/23/I12). A total of 104 neonates with RDS requiring respiratory support within 6 h of birth were enrolled. Surfactant (beractant 100 mg/kg) was administered based on clinical deterioration, radiological evidence of RDS, and FiO_2 requirement, following European Consensus Guidelines on RDS management (2022 update). OSI was calculated using the formula: [mean airway pressure (cmH_2O) × FiO_2 (%)]/SpO_2 (%). For neonates on nasal continuous positive airway pressure (nCPAP), mean airway pressure was estimated as set CPAP pressure plus a correction factor. Measurements were recorded at admission (0 h) and at 2, 4, and 6 h. Receiver operating characteristic (ROC) curve analysis determined optimal cutoff values. Statistical analysis was performed using SPSS version 26.0.

Results: Of 104 neonates, 42 (40.4%) required surfactant therapy. Of the total cohort, 84 (80.8%) were initially placed on nCPAP and 20 (19.2%) on mechanical ventilation; 22 (21.2%) required escalation from nCPAP to mechanical ventilation. The median time to surfactant administration was 3.2 h (IQR: 2.1–4.8). The surfactant group had significantly higher mean OSI at admission (3.58 ± 0.89 vs. 2.04 ± 0.62, p <0.001). ROC analysis revealed an optimal OSI cutoff of 2.6 at admission with 85.7% sensitivity, 77.4% specificity, and an AUC of 0.913 (95% CI: 0.857–0.969). A critical OSI cutoff of 2.2 provided 95.2% sensitivity with 56.5% specificity. Multivariate analysis identified gestational age <30 weeks (OR 7.85, 95% CI: 2.89–21.32), OSI ≥2.6 (OR 6.78, 95% CI: 2.45–18.76), and FiO_2 ≥0.4 (OR 5.13, 95% CI: 1.98–13.29) as independent predictors. On separate multivariate logistic regression analysis for mortality, OSI >3.5 at admission (OR 22.74, 95% CI: 4.12–125.63, p <0.001) and gestational age <28 weeks (OR 14.12, 95% CI: 2.56–77.89, p = 0.002) were significant independent predictors of mortality.

Conclusion: OSI at admission is a reliable, non-invasive predictor of surfactant requirement in neonates with RDS. An OSI cutoff of 2.6 provides optimal predictive accuracy, while 2.2 serves as a critical threshold for high-sensitivity screening. OSI >3.5 is an independent predictor of mortality on multivariate regression analysis. Serial OSI monitoring can guide timely surfactant administration, particularly in settings where arterial blood gas analysis is unavailable.

Keywords: Neonate, Oxygenation index, Preterm, Pulse oximetry, Surfactant

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Respiratory Severity Score during the First 3 Hours of Life as a Predictor for Failure of Noninvasive Respiratory Support and Need for Late Rescue Surfactant Administration

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Am J Perinatol 2024;41(suppl S1):e2613–e2621.

Abstract

Objective Preterm infants often develop failure of noninvasive respiratory support. These infants miss the advantages of early rescue surfactant therapy. In this study, we evaluate the utility of respiratory severity score (RSS) during the first 3 hours of life (HOL) as a predictor for failure of noninvasive respiratory support.

Study Design We conducted a post hoc analysis of infants between 23 and 40 weeks' gestational age who received usual care in the AERO-02 clinical trial. Univariate and multivariable logistic regression analysis were used to assess whether the RSS summary measures were associated with the odds of surfactant administration.

Results Study involved 146 infants. Sixty-four infants (45%) received surfactant within the first 72 hours. Administration of surfactant was associated with the mean RSS ($p < 0.01$) and the linear trend ($p < 0.01$).

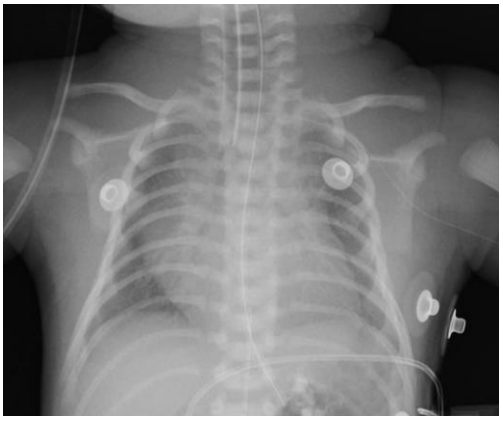
Conclusion We demonstrated that RSS during the first 3 HOL can predict failure of noninvasive respiratory support and need for late rescue surfactant administration. Optimal RSS cutoffs for early rescue surfactant therapy need to be determined in large cohort studies.

Keywords
- respiratory distress syndrome
- surfactant
- early rescue surfactant
- CPAP failure
- respiratory severity score

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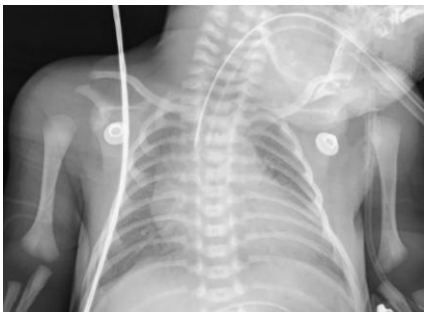
Ca lâm sàng 1

- Bé trai, con 1/1, sinh mổ vì tim thai nhanh, non 32 tuần, CNLS 2640g, mẹ đái tháo đường thai kỳ, APGAR 5/6
- Sau sinh tim thai 190-200 lần/phút → SVT (nhịp tim 200-300 lần/phút), sốc → thở máy, vận mạch, adenosin, amiodarone → chuyển BVNĐ2
- Tại BVNĐ2: em đừ, nhịp tim 270 lần/phút, SpO_2 70%/ bóp bóng → thở máy, adenosine, sốc điện, vận mạch, amiodarone, kháng sinh, dịch truyền → chuyển HSSS
- Tại HSSS: thở máy PI/PEEP 22/8cmH_2O, FiO_2 100%, SpO_2 87%, X-quang phổi (hình bên), LUS 10 điểm (RLAT, RLA, LLAT, LLA: B-line hội tụ, có ít đông đặc < 1cm; RUA, LUA: B-line ít) → bơm 3 lọ Beractant → giảm FiO_2 dần (25%)
- Cai máy sau 2 tuần → NCPAP → thở khí trời, ngưng KS, ăn sữa



Ca lâm sàng 2

- Bé trai, con 2/2, sinh mổ vì mẹ tiền sản giật, non 35 tuần, sau sinh suy hô hấp, thở NCPAP → chuyển BVNĐ2 → thở co lõm ngực nặng → đặt NKQ → chuyển HSSS
- Tại HSSS: thở máy (PI/PEEP 15/7cmH_2O, FiO_2 40%), khí máu (pH 7.2, pCO2 59, pO2 52, BE -6), X-quang phổi (hình bên)
- LUS 2 lần (12 giờ tuổi & 15 giờ tuổi): 5 điểm
  - RLAT, RUA, RLA, LLAT, LUA: B-line ít
  - LLA: A-line
- Cai máy sau 60 giờ nhập viện





Thông điệp

- Một quá trình đánh giá và điều chỉnh liên tục
- Cần kết hợp nhiều yếu tố để nhận diện chính xác trẻ cần surfactant
- Giúp tối ưu hoá điều trị, hạn chế tổn thương do can thiệp (muộn/ quá mức)
- Siêu âm phổi là một phương tiện hữu ích trong điều trị cá thể hoá
- Các chỉ số OSI, RSS hứa hẹn trong dự đoán khả năng bơm surfactant


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