

ÖKSÜRÜK ve BALGAM ÇIKARMA

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ÖĞRENİM HEDEFLERİ

Bu bölüm sonunda okuyucu;

1. Yoğun Bakım Ünitesinde (YBÜ) balgam nedenlerini bilir,
2. YBÜ'de balgam retansiyonunun klinik belirtilerini tanır,
3. Öksürüğü süresine göre sınıflandırır,
4. Karakterine göre balgamı ayırteder,
5. YBÜ'de öksürüğün hasta üzerine etkilerini anlatır,
6. YBÜ'de balgamın hasta üzerine etkilerini farkeder,
7. YBÜ'de spontan solunumu olan hastalarda balgam retansiyonunu çözümlemeye yönelik yapılacak uygulamaları sıralar,
8. YBÜ'de mekanik ventile hastalarda balgam retansiyonunu çözümlemeye yönelik yapılacak uygulamaları sıralar,
9. Aspirasyona gereksinim duyulduğunu gösteren belirtileri tanır.

GİRİŞ

Mukosiliyer hareket ve öksürük refleksi havayollarındaki balgamın temizliğini kolaylaştırır. Sağlıklı bireyler günde 10-100 ml balgam üretirler ve bu balgam merkeze doğru olan mukosiliyer hareket ile temizlenir. YBÜ'de; mukosiliyer aktivitenin azaldığı akciğerler hastalıkları, öksürük refleksinin bozulduğu akciğer ve akciğer dışı sorunlar, mekanik ventile hastalarda "cuff"lı trakeostomi tüpünün varlığı, dehidratasyon, hipoksemi, mobilite azlığı ve yeterli nemlendirmenin sağlanamaması gibi birçok durumunda balgam retansiyonu gelişir. Balgam retansiyonu

KAYNAKLAR

1. Porth CM. Respiratory function. In: Essentials of Pathophysiology. Third ed. China: Wolters Kluwer & Lippincott Williams & Wilkins; 2011. p.513- 539.
2. Smeltzer SC, Bare BG, Hinkle JL, Cheever KH. Gas exchange and respiratory Function. In: Brunner&Suddarth's Textbook of Medical – Surgical Nursing. Twelfth ed. Philadelphia: Wolters Kluwer& Lippincott Williams &Wilkins; 2010. p.484-516.
3. Koulenti D, Lisboa T, Brun-Buisson C, Krueger W, Macor A, Sole-Violan J, et al. Spectrum of practice in the diagnosis of nosocomial pneumonia in patients requiring mechanical ventilation in European intensive care units.Crit Care Med 2009; 37(8): 2360-8.
4. Sallam SA, Arafa MA, Razek AA, Naga M, Hamid MA. Device-related nosocomial infection in intensive care units of Alexandria University Students Hospital. East Mediterr Health J 2005;11(1-2): 52-61.
5. Richards MJ, Edwards JR, Culver DH, Gaynes RP. Nosocomial infections in medical intensive care units in the United States. National Nosocomial Infections Surveillance System. Crit Care Med 1999; 27(5): 887-92.
6. Richards MJ, Edwards JR, Culver DH, Gaynes RP. Nosocomial infections in pediatric intensive care units in the United States. National Nosocomial Infections Surveillance System. Pediatrics 1999;103(4): e39.
7. Dallas J, Skrupky L, Abebe N, Boyle WA 3rd, Kollef MH.Ventilator-associated tracheobronchitis in a mixed surgical and medical ICU population. Chest 2011;139(3):513-8.
8. Craven DE, Lei Y, Ruthazer R, Sarwar A, Hudcova J. Incidence and outcomes of ventilator-associated tracheobronchitis and pneumonia. Am J Med 2013; 126(6): 542-9.
9. McCool FD, Rosen MJ. Nonpharmacologic Airway Clearance Therapies: ACCP Evidence-Based Clinical Practice Guidelines. Chest 2006; 129(1): 250S–259S.
10. Gibson PG, Chang AB, Glasgow NJ, Holmes PW, Katelaris P, Kemp AS, et al. CICADA: Cough in Children and Adults: Diagnosis and Assessment. Australian Cough Guidelines summary statement. MJA 2010; 192: 265–271.
11. Holmes RL, Fadden CT. Evaluation of the Patient with Chronic Cough. Am Fam Physician 2004; 69(9): 2159-2166.
12. Thompson M, Vodicka TA, Blair PS, Buckley DI, Heneghan C, Hay AD, et al. Duration of symptoms of respiratory tract infections in children: systematic review. BMJ 2013; 347: f7575.
13. Goldsobel AB, Chipps BE. Cough in the pediatric population. *J. Pediatr* 2010; **156** (3): 352–358.
14. França EET, Ferrari F, Fernandes P, Cavalcanti R, Duarte A, Martinez BP, et al. Physical therapy in critically ill adult patients: recommendations from the Brazilian Association of Intensive Care Medicine Department of Physical Therapy. Rev Bras Ter Intensiva 2012; 24(1): 6-22.
15. Ambrosino N, Venturelli E, Vagheggi G, Clini E. Rehabilitation, weaning and physical therapy strategies in chronic critically ill patients. Eur Respir J 2012; 39: 487–492.
16. Carol Law. Recognition, prevention and management of sputum retention. Nursing Times 2003; 99(23): 49-51.

17. Jelic S, Cunningham JA, Factor P. Clinical review: Airway hygiene in the intensive care unit. *Critical Care* 2008; 12: 209.
18. Ambrosino N, Janah N, Vagheggi G. Physiotherapy in critically ill patients. *Rev Port Pneumol* 2011; 17(6):283-288.
19. Makhabah DN, Ambrosino N. Airway Clearance in the Intensive Care Unit. *EMJ Respir* 2013; 1:135-139.
20. Stiller K. Physiotherapy in Intensive Care. An Updated Systematic Review. *Chest* 2013; 144(3): 825–847.
21. Strickland SL, Rubin BK, Drescher GS, Haas CF, O'Malley CA, Volsko TA, et al. AARC clinical practice guideline: effectiveness of nonpharmacologic airway clearance therapies in hospitalized patients. *Respir Care* 2013; 58(12): 2187-93.
22. Gosselink R, Bott J, Johnson M, Dean E, Nava S, Norrenberg M, et al. Physiotherapy for adult patients with critical illness: recommendations of the European Respiratory Society and European Society of Intensive Care Medicine Task Force on Physiotherapy for Critically Ill Patients. *Intensive Care Med* 2008; 34(7): 1188-99.
23. Andrews J, Sathe NA, Krishnaswami S, McPheeers ML. Nonpharmacologic airway clearance techniques in hospitalized patients: A systematic review. *Respir Care* 2013; 58(12): 2160-2186.
24. Ciesla ND. Chest Physical Therapy for Patients in the Intensive Care Unit. *Physical Therapy* 1996; 76(6): 609-625.
25. Morice AH, McGarvey L, Pavord I, on behalf of the British Thoracic Society Cough Guideline Group. Recommendations for the management of cough in adults. *Thorax* 2006;61(Suppl I): i1–i24.
26. Özden D. Kapalı Sistem Aspirasyon Yöntemi. C.Ü. Hemşirelik Yüksekokulu Dergisi 2007; 11(3): 29-37
27. Arı A. Klinikte Mekanik Ventilasyon Uygulamalarında Sorun Giderme. Yoğun Bakım Hemşireliği Dergisi 2003; 7(1): 24-30.
28. Terzi B, Kaya N. Yoğun Bakım Hastasında Hemşirelik Bakımı. Yoğun Bakım Derg 2011; 1: 21-5.
29. Savcı S. Yoğun Bakım Ünitesinde Göğüs Fizyoterapisi. Yoğun Bakım Dergisi 2001;1(1): 33-40.
30. Hopper PD, Brandford JL. Respiratory system function, assessment, and therapeutic measures. In: Williams LS, Hopper PD, eds. *Understanding Medical Surgical Nursing*. Forth ed. Philadelphia: F. A. Davis Company; 2011. p.591- 621.
31. Chatburn RL. High-frequency assisted airway clearance. *Respir Care* 2007; 52 (9): 1224-1235.
32. Osman LP, Roughton M, Hodson ME, Pryor JA. Short-term comparative study of high frequency chest wall oscillation and European airway clearance techniques in patients with cystic fibrosis. *Thorax* 2010; 65 (3):196-200.
33. Anderson CA, Palmer CA, Ney AL, Becker B, Schaffel B, Quicke RR. Evaluation of the Safety of high-frequency chest wall oscillation (HFCWO) therapy in blunt thoracic patients. *J Trauma Manag Outcomes* 2008; 2 (1): 8–14.
34. Myers TR. Positive expiratory pressure and oscillatory positive expiratory pressure therapies. *Respir Care* 2007; 52 (10): 1308-1326.

35. Paulus F, Veelo DP, de Nijs SB, Beenen LF, Bresser P, de Mol BA, et al. Manual hyperinflation partly prevents reductions of functional residual capacity in cardiac surgical patients: a randomized controlled trial. *Crit Care* 2011; 15 (4):R187.
36. Paulus F, Binnekade JM, Middelhoek P, Schuitz MJ, Vroom MB. Manual hyperinflation of intubated and mechanically ventilated patients in Dutch intensive care units: a survey into current practice and knowledge. *Intensive Crit Care Nurs* 2009; 25 (4): 199-207.
37. Paulus F, Binnekade JM, Vroom MB, Schultz MJ. Benefits and risks of manual hyperinflation in intubated and mechanically ventilated intensive care unit patients: a systematic review. *Crit Care* 2012; 16 (4): R145.
38. Ambrosino N, Makhabah DN. Physiotherapy in the ICU. RT for Desicion Makers in Respiratory Care Published on July 25, 2014. (<http://www.rtmagazine.com/2014/07/physiotherapy-icu/>)
39. McCool FD, Rosen MJ. Nonpharmacologic Airway Clearance Therapies: ACCP Evidence-Based Clinical Practice Guidelines. *Chest* 2006; 129: 250S–259S
40. Berney S, Haines K, Denehy L. Physiotherapy in Critical Care in Australia. *Cardiopulmonary Physical Therapy Journal* 2012; 23(1): 19-25.
41. Enrico Clini, Nicolino Ambrosino. Early physiotherapy in the respiratory intensive care unit. *Respiratory Medicine* (2005) 99, 1096–1104.
42. van de Leur JP, Denehy L. Post-operative mucus clearance. In: Rubin BK, van der Schans CP, Eds. In the series of Lung Biology in Health and Disease volume 188. New York: Marcel Dekker Inc; 2004. p.1-30.
43. Morice AH, Fontana GA, Belvisi MG, Birring SS, Chung KF, Dicpinigaitis PV, et al. ERS guidelines on the assessment of cough. *Eur Respir J* 2007; 29: 1256–1276.
44. Kopec SE, Kathman DL, Irwin RS. Cough in adults. In: Kellum JA, Gunn SR, eds. *Oxford American Handbook of Critical Care*. New York: Oxford University Press; 2008.p.189-203.
45. İnce Dİ. Yoğun Bakım Ünitesinde Solunum Tedavisi. *Yoğun Bakım* 2006; 6(1): 28-42.
46. Spinou A, Birring SS. An update on measurement and monitoring of cough: what are the important study endpoints? *J Thorac Dis* 2014;6(S7):S728-S734.
47. Morice AH, Fontana GA, Belvisi MG, Birring SS, Chung KF, Dicpinigaitis PV, et al. ERS guidelines on the assessment of cough. *Eur Respir J* 2007; 29: 1256–1276.
48. Leidy NK, Rennard SI, Schmier J, Jones MKC, Goldman M. The Breathlessness, Cough, and Sputum Scale: The Development of Empirically Based Guidelines for Interpretation. *Chest* 2003; 124:2182–2191.
49. Crawford B, Monz B, Hohlfeld J, Roche N, Rubin B, Magnussen H, et al. Development and validation of a cough and sputum assessment questionnaire. *Respiratory Medicine* 2008; 102: 1545-1555.