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一、臨床情境描述：

一位長期使用呼吸器之患者，口腔清潔會影響呼吸器相關性肺炎 (Ventilator-associated pneumonia, VAP) 的發生率。臨床上大都以口腔棉枝沾漱口水或生理食鹽水執行口腔護理。最近有一篇報導，說明呼吸器依賴病患，長期使用chlorhexidine會增加死亡率，所以是以生理食鹽水進行口腔護理尤佳。對一個呼吸器依賴患者而言，使用chlorhexidine較生理食鹽水能降低VAP的發生率，不過，chlorhexidine使用久了會增加病人死亡率。請問：若您是病患的主治醫師，您的治療方向為何？

二、PICO：

PICO1：

P：mechanically ventilated patients.

I：oral care.

C：no oral care.

O：increase ventilator-associated pneumonia.

(key word：”mechanically ventilated patients” and “oral care” and “increase ventilator-associated pneumonia”)

PICO2：

P：mechanically ventilated patients.

I：oral care with chlorhexidine.

C：oral care with normal saline.

O：decrease ventilator-associated pneumonia.

(key word：”ventilated patients” and “chlorhexidine” or “saline” and “decrease ventilator-associated pneumonia”)

三、搜尋過程&最佳文獻(依照上傳順序)：

經由Pubmed、Cochrane、BMJ及JAMA等資料庫，分別輸入上述keyword，搜尋出較符合的文獻共12篇，經過篩選，排除與PICO不符合的文獻後，挑選下列5篇。

The image shows a screenshot of a search process across two databases. On the left is the Cochrane Library search interface. The search bar contains the query: "mechanically ventilated patients and oral care and increase ventilator-associated pneumonia". Below the search bar, the results for the Cochrane Central Register of Controlled Trials are displayed, showing a list of search results with details like "Effect of Chlorhexidine prophylactic oral care on ventilator-associated pneumonia in intensive care patients" and "Oral care intervention to reduce incidence of ventilator-associated pneumonia in the ICU". On the right is the PubMed Clinical Queries interface. The search bar contains the query: "ventilated patients and chlorhexidine or saline and decrease ventilator-associated pneumonia". Below the search bar, the results for Clinical Study Categories and Systematic Reviews are displayed, showing a list of search results with details like "Toothbrushing for critically ill mechanically ventilated patients: a systematic review and meta-analysis of randomized trials evaluating ventilator-associated pneumonia" and "Toothbrushing for critically ill mechanically ventilated patients: a systematic review and meta-analysis of randomized trials evaluating ventilator-associated pneumonia".

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- 文獻2. Waleed Alhazzani, MD¹; Orla Smith, RN, MN^{2,3}; John Muscedere, MD⁴; James Medd, MLIS⁴; Deborah Cook, MD^{1,5}(2013). [Toothbrushing for Critically Ill Mechanically Ventilated Patients: A Systematic Review and Meta-Analysis of Randomized Trials Evaluating Ventilator-Associated Pneumonia](#). Critical Care Medicine February 2013 • Volume 41 • Number 2.
- 文獻3. Michael Klompas, MD; Kathleen Speck, MPH; Michael D. Howell, MD; Linda R. Greene, RN; Sean M. Berenholtz, MD. [Reappraisal of Routine Oral Care With Chlorhexidine Gluconate for Patients Receiving Mechanical Ventilation Systematic Review and Meta-analysis](#). JAMA Intern Med. Doi:10.1001/jamainternmed.2014.359.
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- 文獻5. Philippe Seguin, MD, PhD^{1,2,3}; Bruno Laviolle, MD, PhD^{3,4,5}; Claire Dahyot-Fizelier, MD, PhD^{6,7,8}; Romain Dumont, MD⁹; Benoit Veber, MD¹⁰; Soizic Gergaud, MD¹¹; Karim Asehnoune, MD, PhD⁹; Olivier Mimos, MD, PhD^{6,7,8}; Pierre-Yves Donnio, PharmD^{12,13}; Eric Bellissant, MD, PhD^{3,4,5}; Yannick Malledant, MD^{1,2,3}; for the Study of Povidone Iodine to Reduce Pulmonary Infection in Head Trauma and Cerebral Hemorrhage Patients (SPIRIT) ICU Study and AtlanRéa Groups(2014). [Effect of Oropharyngeal Povidone-Iodine Preventive Oral Care on Ventilator-Associated Pneumonia in Severely Brain-Injured or Cerebral Hemorrhage Patients: A Multicenter, Randomized Controlled Trial](#). Critical Care Medicine January 2014 • Volume 42 • Number 1.