

## Case 慈惠医大 No. 2 (For instructor)

### RRS: Declining consciousness due to sepsis

#### 1. Scenario Concept

Urinary tract infections (UTIs) are considered to be the most common bacterial infection. According to the 1997 National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey, UTI accounted for nearly 7 million office visits and 1 million emergency department visits, resulting in 100,000 hospitalizations. Infectious condition could progress to shock and CPA if not response immediately. In this scenario, it represented a diabetic male admission to general ward with UTI. Conscious change and sepsis are needed to be observed and prompt treatment and RRS activation are practiced.

#### 2. Education Purpose

- ✓ Identify respiratory pattern and desaturation and provide treatment
- ✓ Activate RRS promptly according to RRS activation criteria
- ✓ Perform communication with SBAR  
(Situation-Background-Assessment-Recommendation) skill for RSS staff

#### 3. Patient background

A 57-year-old man was hospitalized yesterday for pyelonephritis. Originally insulin was given in the morning, but he hoped waiting for wife to have breakfast. Till his wife coming, she reported the nurse that the appearance is strange.

#### 4. Observation and debriefing

Initiate assessment

Identify consciousness level and neurologic examination

Perform further examination and first treatment

Inform nurses and activate RRS

## 5. Hardware preparedness

- Resuscitation kit
- IV fluid and IV setting
- Oxygen devise: nasal cannula, simple mask, ventri mask, non-rebreathing mask, bag-valve-mask
- EKG monitor, BP monitor
- The simulator manikin: SimMan
- Medication: Dextrose 50%

## 6. Scenario staging

### Scenario Phase 1 ( 0-3 minutes)

- Initial vital sign: HR 120 /minutes, BP 100 / 60 mmHg, RR 20 / minutes, Temperature: 39 °C, Consciousness: E1 V2 M4 , SpO2: 98 % (Room air)
- Volunteered information: A 57-year-old man was hospitalized yesterday for acute pyelonephritis. Insulin was given before breakfast. But the patient hope to eat after his wife arrival. On his wife arrival, she reported to the nurse that the appearance is strange.
- Manikin setting:
  - Initial vital sign: HR 120 /minutes, BP 100 / 60 mmHg, RR 20 / minutes, Temperature: 39 °C, Consciousness: E1 V2 M4 , SpO2: 98 % (Room air)
  - Pupils: 3mm/ 3mm, light reflex: +/+
  - Voice: moaning
  - EKG: sinus tachycardia, rate: 120 /minutes
  - Chest: bilateral clear breathing sound
  - Heart: clear
  - Abdomen: WNL
  - Extremities: warm
  - Pulse pressure: strong
  - Finger sugar: LOW

- Treatment:
  - Check vital sign
  - Primary airway, breathing, circulation, and defib (ABCD) survey
  - Arrange Teamwork (leader, mutual support, communication, situation monitor)
  - Set O2, IV, monitor (EKG, BP, pulse oximeter)
  - Activation RRS according to consciousness change (GCS decreased > 2 points)
  - Medication:
    - ✓ Dextrose 50% 20ml

### Scenario Phase 2 (3-6 minutes)

- Vital sign: HR 136 /minute, BP 90 / 60 mmHg, RR 40 / minute, Temperature: 39.5 °C, Consciousness: E2 V3 M5, SpO2: 98 % (Room air)
- Volunteered information: After glucose given, the consciousness improved partially
- Manikin setting:
  - EKG: sinus tachycardia , rate: 136 /minutes
  - Vital sign: HR 136 /minute, BP 90 / 60 mmHg, RR 40/ minute, Temperature: 39.5 °C, SpO2: 98 %
- Treatment:
  - Quick re-assess ABCD
  - Activation RRS according to consciousness change (increased respiratory rate and heart rate)
  - Arterial blood gas
  - Complete EKG
  - Sugar recheck → 200
  - Give normal saline hydration

## 7. Image and Laboratory data

- Arterial blood gas

Lab	Data	Normal
pH	7.38	7.36 - 7.44
P <sub>CO2</sub>	38	36 - 44 mm Hg
HCO <sub>3</sub> <sup>-</sup>	20	22 - 26 mEq/L


## 8. Task checklist

- Recognize symptoms associated with sepsis
- Use SBAR to make appropriate reports to RRSNs.
  
- Check vital sign
- Take a medical record
- Evaluation of Consciousness
- Evaluation of airway / respiration
- Evaluation of circulation
- Application of monitor (AED or defibrillator)
  
- Move the bed and remove the head board and side fence if necessary
- Perform ventilation support by using oxygen advice or BVM if necessary
- Secure infusion route and start fluid infusion
- Blood sampling and search for cause of lower consciousness level (hypoglycemia etc.)
  
- Re-evaluate patient condition