MANUSCRIPT FOR THE CASE: Postoperative nursing care in a recovery room

Instruction to the lecturers using the 360 video simulation postoperative nursing case

The target group of the 360 ViSi postoperative patient care in recoveryroom: Nursing student on the first course of surgical patient nursing care (surgical and perioperative course).

The learning session contains three parts:
- The orientation and preparation phase containing pretasks to be learned by the students.
- The 360 video case game
- The debriefing discussion after the video case gaming

Learning goals of the scenario:

After the 360 video simulation the student
- is able to master the patient postoperative care in the recovery room
- is able to identify and treat complications during the care in the recovery room
- masters the monitoring of the vital signs and the NEWS point calculation of the patient condition
- masters the postoperative pain and nausea control
- masters the postoperative patient's documentation and reporting of care

The hotspots (learning tasks)

HOTSPOT 1 **Instructions for gaming**

Surgical operation: Appendicectomia laparoscopica

THE PATIENT AND SITUATION DESCRIPTION

Name of the scenario: Postoperative care in recovery room

Patient: Alex Lee, male, 45

Dg: Appendicitis acuta

ROOM DESCRIPTION: (What we see in the room)

Recovery room appears as an environment (there is no other patients). The patient has just been transferred from the operating room to the recovery room. The patient sleeps in his bed.

Equipment: patient bed, monitor, blood-pressure gage, oxygen saturation, ECG cables, oxygen, suction device and catheters, medication and ABCDE- trolley, electronic patient document.

SCENARIO DESCRIPTION: (actions in the room)

Patient has been transferred from the operation room to the recovery room and he is laying on the bed.

Video 1 Patient and the monitor

The nurse receive the report of the patient in the form of video:

Patient is Alex Lee, 110474-222M, healthy man, without any medication. Patient arrived yesterday evening at 6.30 pm. to the emergency unit complaining severe abdominal pain. The pain had started

from the early morning, at first covering the whole abdomen and later it focused to the Mc Burney point. The patient has had nausea and vomiting, no diarrhea. The patient had fever 39 degrees when arrived at the emergency. The blood pressure was RR 136/75, pulse 85, SaO2 96%. Laboratory tests were: hemoglobine 145, leucosytes 18.4, Na 138, potassium 3.8, Kreatinine 85 and CRP 87. The patient arrived in the operating room at 11 pm for appendicectomy via laparoscopy. The operation was perfomed under general anesthesia using fentanyl, propofol, rocuron and sevofluran. For postoperative residual curarization; neostigmin was used as an antagonism of neuromuscular block. Glykopyrrolat was used for the side effects of neostigmine. The anesthesia and the operation were successfully performed without complications. Intravenous fluid Ringersteril 1000 ml is currently administered. The antibiotic medication had been given before the arrival at the operation department. The operation diagnosis was: Appendicectomia laparoscopica.

In the end of the operation Robivacain 5mg/ml 200mg=40ml for local anesthesia was injected to the patient's abdominal muscles. The umbilicus was clearly infected, but not perforated. The wound dressings are now clean. The stiches are resorbable. The patient will probably be ready to return home on the first postoperative day. The analgesic prescription is: Paracetamol and Ibuprofeine.

The instruction on after the report:
Now you, as a nursing student, should continue the patient's postoperative observation and care in the recovery room. Start by monitoring the patient. Please, choose the needed parameters.

Anaesthesia doctor's prescriptions and NEWS points table can be seen on the screen if needed.

Information and the prescriptions:
The patient weight is about 85-90kg
For pain Oxycodone (Oxanest) 10mg/ml: 3-4mg iv. (repeated until the pain is OK, = VAS < 4)
For nausea or vomiting: Ondansetron (2mg/ml): 4 mg iv. or
                           DHBP (dehydrobentsperidol 2,5 mg/ml): 0,50-0,75mg iv.
For low NIBP Efedrin 5mg iv.
For low pulse Atropine 0.5 mg iv.

Video: patient and the monitor
The patient lies on the bed, looks around, opens, and closes the eyes.

HOTSPOT 2: MONITORING OF THE PATIENT
Multiple-choice question
The parametrics are seen on the monitor screen:

awRR (airway respiratory rate)
HR (heart rate)
Pulse
Sp02 (oxygen saturation)
NIBP (non-invasive blood pressure)
TOF ("train of four" measure muscle relaxation)
etN20 (nitrous oxide)
etO2 (End-tidal oxygen concentration, patient is not connected to the respirator)

inO2 (inhaled nitric oxide)
ABP (arterial blood pressure)
Tblood (blood temperature)
PAP (positive airway pressure)
etCo2 (end-tidal carbon dioxide)

Supervision after response:

At the moment, this patient's postoperative observation five parametres are needed to the patient follow-up.

A. the student chooses only a part of the options:
   Text "Please, choose more parameters"
B. the student choices are partly wrong and partly right:
   Text "You have some parameters correct, and some wrong.
       Please, choose again."
   When the correct parameters are selected:
C. Text "All the parameters are correct now. Well done."

HOTSPOT 3. EKG –electrocardiography electrods

Multiple choice question:
Choose the placements for electrocardiogram connection:
a   the second intercostal space on the right
b   the second intercostal space on the left
c   the fifth intercostal left front axillary line
d   left wrist
e   right wrist
f   left scapula
g   left ankle
h   right ankle
I   in the middle of the back

Supervision after response:
Check the placement of the electrodes and choose again.

HOTSPOT 4. NIB blood pressure

Multi-choice question:
Where do you insert the blood pressure cuff?
a Right arm, because there is the infusion cannula
b Left arm, because there is not infusion cannula
c Right arm, because there is not infusion cannula
d Left arm, because there is the infusion cannula

Supervision after response:
The blood pressure cuff should be inserted in the hand where there is not fluid infusion.

HOTSPOT 5. Oxygen saturation

5.1   Multiple choice question

Where do you insert the oxygen saturation measurement tool?

a The middle finger of the right hand

b The middle finger of the left hand

c The thumb of the left hand

d The forefinger of the left hand

e The forefinger of the right hand

Supervision after response:

The saturation measurement tool should not be in the same hand with the blood pressure cuff.

5.2 Multiple choice question

What features do you observe from the patient's breathing?

a use of respiratory muscles

b accessibility and ease of breathing

c openness of airways

d symmetry of breathing

e wheezing or other sound

f observing the color of the patient's skin, lips and nails

g coughing

h phlegm

i oxygen saturation

j respiratory rate

k depth and breathing work

Supervision after response:

All the features in the previous alternatives should be observed.

5.3 Multiple choice question

What is the normal breathing frequence of this patient?

a below 8

b 12-20

c 21-25

d 26 – 35

Supervision after response:

The normal breathing frequence is 12-20 if there is no special reason for other frequence.

5.4 Level of consciousness

Multiple choice question: Please, select issues related to monitoring of the patient's the level of consciousness:

a Eye-opening when asked

b Answers to the questions

c is oriented to time and place

d follows instructions

e is able to stand

f understand the surgery technique

g know his method of anaesthesia

Supervision after response:
Glasgow coma scale is a useful tool to evaluate the patient's consciousness level. If you have forgotten the levels, please, update your knowledge.

HOTSPOT 6 Basic NEWSPOINTS

For the NEWS point calculation the parameter values on the monitor are:
HR 67, Pulse 67, NiBP sys. 116/80 (92), Sa02 98, awRR 14

Multiple-choice question:
Text: Calculate the patient's NEWS POINTS at this moment. The body temperature is 37,5 degrees Celsius.
a NEWS points
b NEWS points 0
c NEWS points

Supervision after response:
Text: If calculated correctly Correct! Well done!
Text: If the calculation is false Evaluate the patient condition again and calculate NEWS points.

Video: Change in the patient condition
HOTSPOT 7. OXYGEN MASK SELECTION
The oxygen saturation decreases to 94.

M**ultiple-choice question: How do you act when the saturation is decreasing?**
a I don't have to do anything, I just continue monitoring basic vital signs
b I must call to the doctor
c I must start oxygen therapy

Supervision after response:
In the case, the saturation decreases below 95, this patient needs some extra oxygen.

Multiple-choice questions
What do you do?
a I start oxygen 10 litres / 40% with a red venture mask
b I take a white venture mask of oxygen 4 litres/28%
c I take 15 litres/60% of oxygen with a green venture mask

Supervision after response:
In this case you can first start by using white mask (4l/min = 28%).
Colours of the different venture masks
blue: 2l /min = 24% oxygen
white: 4l /min = 28%
yellow: 8l /min = 35%
red: 10 l/min = 40%
green: 15 l/min = 60%

HOTSPOT 8 OPERATION AREA INSPECTION

Circulation
Multiple choice question
What do you observe on the patient's surgical area in recovery room? Choose the correct options.

a wound swabs
b abdominal circumference
c leakage or bleeding in the wound dressings
d redness and heat around the wound
e swelling around the wound
f quantity, quality and color of the tissue secretion
g follow up the symptoms of inflammation
h pain
i measurement of diuresis per hour
j size of pupils
k testing muscle strength
l testing of limb mobility
m testing of smell and taste
n hearing testing
o nothing to be observed

Supervision after response:
A. If student does not choose all the correct options
      Text: Find out more issues related to observation of the abdominal region. Review this from a text
      book.
B. If the student selects partly correctly and partly incorrectly
      Text: Select more or remove the unnecessary ones. Review this from a text book.
C. If the student selects all correctly
      Text: Well done.

HOTSPOT 9   Exposure
Exposure/recovery from the general anaesthesia and curarization:

Multiple choice question:
From which signs you can assess the residual relaxation from the general anaesthesia? Choose the correct options
a Patient's dilated pupils
b Patient is not able to raise his head
c Patient's sensor deficiencies in the lower limbs
e Patient's inefficient breathing
f Nausea
g Patient is incapable of squeezing the hand and not sticking his tongue out
h Muscle spasm
I Patient is unable to cough effectively
Supervision after response:
If student does not choose all the correct options
      Text: Choose more options. Review this from a text book.

If the student selects partly correctly and partly incorrectly
        Text: Select more or remove the unnecessary options. Review this from a text book.
If the student selects all correctly
        Text: Well done.

HOTSPOT 10   **Body temperature**

Patient's temperature (37.2 C):
10.1
video 5 : "It's so hot here."
Multiple choice question
How do you act? Choose the correct option.
a I continue observing the patient body temperature and write to the patient document value 37.2 C
b I start warming the patient and put on forced-air warming (Bair Hugger) blanket.
c I remove the blankets off, because patient need cooling.

Supervision after response:
A patient suffering from fever should not be heated. Normal temperature maintenance is important.

10.2
video 6"I have cold. Would you, please, give me a blanket."

Video 1: The student measures the patient body temperature (from ear): the result is 37.2 C

Multiple choice question
How do you act? Choose the correct option.
a I continue observing the patient body temperature and write to the patient document value 37.2C
b I start warming the patient and put on forced-air warming (Bair Hugger) blanket.
c I remove the blankets off, because patient need cooling

Video 6 "I have cold. Would you please, give me a blanket."
Supervision after response:
A patient suffering from cold should not be cooled more. Normal temperature maintenance is important.
For the patient convenience, the patient can be warmed because he doesn't have fever.

HOTSPOT 11 **NEWS POINTS**
For the NEWS point calculation the parameter values on the monitor are:
Multiple-choice question:
Calculate the patients NEWS POINTS at this moment based on the values displayed on your monitor. The body temperature is 37,2 degrees Celsius.

A video of patient and the monitor, the saturation starts to alarm and on the monitor the patient's oxygen saturation decreases to 94, pulse is 112 and AWRR 14.

Supervision after response:
Text: If calculated correctly Correct! Well done!
Text: If the calculation is false Evaluate the patient condition again and calculate NEWS points.

HOTSPOT 12 PAIN ASSESSMENT

Pain assessment (VAS is 6)
Pain video 7 patient has painful face and complains: "It hurts, I have pain."

Multiple choice question
What do you do? Select proper option.

a I write the value of VAS to the patient document, no need for anything else
b I call the anesthetist
c I call the surgeon
d I guide the patient to think about something else than pain
e. I give the patient analgesic medication according to the doctor's prescription

Supervision after response:
If student select wrong medication, text: "Wrong answer, choose again!"
After student has selected this, patient says: "Thank you so much, it's much better now".

HOTSPOT 13 What medication and how much do you administer for pain?
- o Sugammadex 4 mg iv.
- o Propofol 10 mg iv.
- o Oxycodone 3mg iv.
- o Ibuprofen 400 mg per os.
- o Ketamine 40mg im.
- o Sugammadex 60 mg iv.

Supervision after response:
Follow always the anaesthesiologit's prescription. If any extra problems, call the doctor.

HOTSPOT 14
Video   **Nausea / vomiting**

How do you act? Select the option:
a I comfort the patient and encourage him to think about positive things (väärin)
b I explain to the patient that it's as a normal and very common phenomenon (väärin)
c I give antiemetic medication according the doctors description. (oikein)

Supervision after response:
Follow always the anaesthesiologit's prescription. If any extra problems, call the doctor.

HOTSPOT 15 Administer the correct antiemetic medication for nausea and vomiting:
- -   Neostigmin 0.5 mg iv.
- -   Rocuron 10 mg iv.
- -   Dehydrobentzperidol 20 mg iv.
- -   Efedrin 0,8 mg iv.
- -   Metcolopramid 20 mg iv.
- -   Atropin 1 mg iv.
- -   Ondansetron 4 mg iv.

- Adrenalin 1 mg im.

Supervision after response:
Follow always the anaesthesiologit's prescription. If any extra problems, call the doctor.

HOTSPOT 16 **NEWS POINTS CALCULATION**
For the NEWS point calculation the parameter values on the monitor are:
Calculate the patients NEWS POINTS at this moment based on the values displayed on your monitor. The body temperature is 37,2 degrees Celsius.
Multiple-choice questions:

HOTSPOT 17 **CRITERIA FOR THE WARD TRANSITION**
The patient is ready for the transfer to the ward. The patient is satisfied, and the nurse gives the report. The 10 criteria for the patient transfer to the ward.

Video: Patient is transferred to the ward from the recovery room.