



King Saud University  
College of Medicine  
Department of Medical Education

**“ ...Will I Achieve  
my dream?”  
Tutorial One**

**Year Two, Nervous System Block**

**Department of Medical Education**

**Student's Case**

**Case 1; 2013**

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Ahmed Saleh, a 28-year-old construction engineer comes in to see Dr Salman in his clinic. Ahmed has noticed loss of taste sensations over the last few months. He also has changes in his voice which has been for some time. Over the last three weeks he noticed that he has difficulty in swallowing.

**Discussion Questions:**

- Are there any difficult words you do not understand?
- List the key information about Ahmed.
- Identify Ahmed's presenting problems.
- For each problem, generate a list of possible causes (hypotheses).
- What further information would you like to know from history to refine your hypotheses?

Ahmed has noticed loss of his taste sensations, over the last 3-4 months. He cannot remember a particular food but he stated that he does not taste foods. He also has change in his voice, about the same time. His speech has become somewhat slurred. He first thought that his taste sensation loss and his voice changes are due to the flu, but these changes continued despite his recovery from the flu.

Three weeks before seeing Dr Salman, Ahmed noticed a numb and a tingling sensation in his right cheek. This was initially slight but gradually spread to involve most of his right face. His friends at work also noticed that the right side of Ahmed's face seemed to be drooping.

About three weeks ago, Ahmed noted difficulty in swallowing large pieces of food. He nearly choked three times during the last few days. He sometimes feels that his gait is unsteady. He has no double vision, headache, or changes in his hearing.

Yesterday, Ahmed noticed a numbness in his left arm and because of these changes he decided to come and see his family doctor.

**Past Medical History**

He has always been healthy and well. He has never been admitted to hospital.

**Family History**

He has no history of any medical problems in his family. His father and mother are alive and healthy. He has two elder brothers and both are healthy.

**Tobacco and Alcohol**

Nil

**Medication and Allergy**

Nil

**Social History**

Ahmed has been married for two years and has a 9-month-old girl. He works as an engineer in an international construction company in Riyadh. He is planning to travel to Canada to study a Master in Engineering at the end of the year.

**Discussion Questions:**

Are there words that you do not understand?

Summarize key information that you have obtained from this progress.

Identify Ahmed's new problems. Provide hypotheses for each problem.

What further information would you like to know from clinical examination?

Ahmed looks a little anxious. His blood pressure, pulse rate, temperature, and respiratory rate are within normal range.

### Nervous System Examination

Cranial nerves:

- Cranial nerves number: 1 (olfactory nerve), 2 (optic nerve), 3 (oculomotor nerve), 4 (trochlear nerve), and 6 (abducens nerve) are all normal
- The 5<sup>th</sup> cranial nerve (trigeminal nerve): Loss of corneal sensation on the right side, and loss of pain and temperature sensations on the right side of the face. Normal on the left side.
- The 7<sup>th</sup> cranial nerve (facial nerve): Weakness on the lower right part of the face.
- The 9<sup>th</sup> cranial nerve (glossopharyngeal nerve) and the 10<sup>th</sup> cranial nerve (vagus nerve): Right palatal movement is poor, and loss of sensation of the soft palate on the right side.
- Other cranial nerves: 8<sup>th</sup> (vestibulocochlear nerve), (11<sup>th</sup> (accessory nerve), and 12<sup>th</sup> (hypoglossal nerve) are normal
- All cranial nerves on the left side are normal.

### Motor Power:

- Gait: unsteady.
- Increased upper and lower limb muscle tone on the left.
- Exaggerated left knee and ankle reflexes and left extensor plantar reflex.
- Exaggerated left biceps, triceps, and brachioradialis reflexes.

Sensory System Examination:

- Loss of pain and temperature sensations on the entire left side of the body.

### Abdominal Examination:

Normal

### Cardiovascular and Respiratory Examinations:

Normal

### Discussion Questions:

Are there words that you do not understand?

Summarize key information that you have obtained from this progress.

Use the new information to refine your hypotheses.

Work out as a team to identify your "learning issues".

## Resources

*A note to students:* You are not required to read all these textbooks and resources to prepare for your learning issues. You could use one textbook or one resource for each discipline. For example, for this case you will need to use a resource covering issues related to the case from four disciplines: Physiology, Anatomy, Histology and Medicine. Once you have identified your learning resources, research them for your learning issues and the questions raised in the group discussion. You might choose to use alternative resources other than those listed below:

### Textbooks:

- Moore KL, Dalley AF. Clinically Oriented Anatomy. 4th ed. Philadelphia: Lippincott, Williams & Wilkins; 1999.
- Rhoades R, and Pflanzer R. Human Physiology, 4th ed. London: Brooks/Cole, 2003.
- Drake RL, Vogl W, Mitchell AWM. Gray's anatomy for students. Philadelphia: Elsevier Churchill Livingstone, 2005.
- Guyton AC and Hall JE. Textbook of Medical Physiology. 10th ed. Philadelphia: WB Saunders & Co, 2000.
- Gartner LP and Hiatt JL. Color Textbook of Histology. 2nd ed. Philadelphia: WB Saunders & Co, 2001.
- Kumar P and Clark M. Clinical Medicine. 5th ed. Edinburgh: WB Saunders, 2002.
- Fox SI. Human Physiology, 9th Ed. McGraw Hill, 2005

### Educational websites:

1. <http://faculty.washington.edu/chudler/chreflex.html#patella>

Knee Jerk Reflex (Patellar Reflex)

Don't be offended by the simple language of these web sites. They are designed for secondary school students. However, they are an excellent introduction to the nervous system. As it is a North American site the hormone noradrenaline is called norepinephrine.

2. <http://www.blackwellpublishing.com/matthews/>  
Neurobiology, Molecules, Cells and Systems. The animations on this website are very useful for your learning.

3.

[http://www.cancerhelp.org.uk/prod\\_consump/groups/cr\\_common/@cah/@gen/documents/generalcontent/about-brain-tumours.pdf](http://www.cancerhelp.org.uk/prod_consump/groups/cr_common/@cah/@gen/documents/generalcontent/about-brain-tumours.pdf)

A quick guide about brain tumours. This guide will help you to understand brain tumours in a simple language. The guide is written to the public.