

## Cases For Teaching Second Year Medical Students

### Head and neck and neuroanatomy

#### Case 1: **(RECURRENT LARYNGEAL NERVE INJURY)**

A 35-year-old woman complains of a 2-month history of hoarseness of her voice and some choking while drinking liquids. She denies viral illnesses. She underwent surgery for a cold nodule of the thyroid gland 9 weeks ago. Her only medication is acetaminophen with codeine.

**1- What is the most likely diagnosis?**

**2- What is the anatomical explanation for her symptoms?**

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### Case 2: (BELL PALSY)

A 28-year-old woman at 19 weeks of pregnancy complains of acute onset of numbness of the right cheek and drooping of the right face that occurred over 1 hour. She denies trauma to the head. On examination, the patient has difficulty closing her right eyelid, and her right nasolabial fold is smoother than on the left. She also is drooling from the right side of her mouth. The remainder of the neurological examination is normal.

**1- What is the most likely diagnosis?**

**2- What is the anatomical mechanism for this condition?**

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### Case 3: (OCULOMOTOR NERVE PALSY)

A 38-year-old male presents to the emergency room with complaints of a persistent headache and problems with his left eye. He has no known medical problems, and his headache is slightly improved with ibuprofen. He denies having any previous problems with his vision. On exam, he is noted to have a left eye with ptosis, dilated pupil, and displacement “down and out.” The remainder of the exam is normal. An MRI shows an aneurysm of the circle of Willis.

**1- Given the physical exam, what ocular muscles are likely not to have been affected?**

**2- Which nerve is likely to have been affected?**

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### Case 4: (MENINGITIS)

A 7-year-old boy is brought into the emergency room for severe headache, nausea, and fever. His parent states that the patient had been in good health until 2 days previously. Bright lights seem to bother him. On examination, he appears lethargic and ill. His temperature is 102° F. Movement of the neck seems to cause some pain. The heart and lung examinations are normal. The patient refuses to flex his head so that his chin will touch his chest because the effort is too painful.

**1- What is the most likely diagnosis?**

**2- What is the most likely anatomical mechanism for this condition?**

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### Case 5: (**CAROTID INSUFFICIENCY**)

A 59-year-old man complains of numbness of his right arm and slurred speech for a 4-hour duration. On examination, he has a blood pressure of 150/90 mm Hg and a normal body temperature. His heart has a regular rate and rhythm. Auscultation of the neck reveals a blowing sound bilaterally.

**1- What is the most likely diagnosis?**

**2- What is the most likely anatomical mechanism for this condition?**

## Cases For Teaching Second Year Medical Students

### Abdomen/pelvis/perineum and back

#### Case 1: (**INGUINAL HERNIA**)

A 44-year-old man complains of discomfort in his right upper thigh over the past 6 months. He works in the garden department of a home improvement center. On examination, there is tenderness at the right inguinal area. When the patient performs a Valsalva maneuver (bearing down to increase intraabdominal pressure), a bulge appears superior to the inguinal crease near the pubic bone.

**1- What is the most likely diagnosis?**

**2- What is the anatomical defect associated with this condition?**

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### Case 2: (GALLSTONES)

A 42-year-old woman is seen by her primary care physician complaining of intermittent colicky pain. She describes the pain as being right upper quadrant (RUQ), starting shortly after eating a meal, and lasting about 30 minutes. During these episodes, she says she feels bloated and nauseated. The patient also states that over the past 2 days, her stools have become very light in color, like the color of sand, and her skin has become yellow.

**1- What is the most likely diagnosis?**

**2- What is the anatomic basis for the clinical condition?**

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### Case 3: (**ACUTE APPENDICITIS**)

An 18-year-old male college student complains of 12-hour abdominal pain that began around his umbilicus but then shifted to the right lower quadrant (RLQ) and right side. He indicates that he has been nauseous over the past several hours. His temperature is 99.4° F. On physical examination, there is mild abdominal tenderness, particularly in the RLQ, but also on the right side. The laboratory analysis of the urine is normal.

**1- What is the most likely diagnosis?**

**2- What accounts for the shift in location of the pain?**



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### Case 4: (ECTOPIC PREGNANCY)

A 19-year-old female who has borne one healthy child is being seen at 7 weeks gestation based on her last menstrual period and her complaints of vaginal spotting and lower abdominal pain. She denies the passage of any tissue through the vagina, trauma, or recent intercourse. Her medical history is significant for a pelvic infection approximately 3 years previously. On examination, her blood pressure is 90/60 mm Hg, heart rate is 110 beats/min, and temperature is within normal limits. The abdomen is normal, and bowel sounds are present and normal. On pelvic examination, the external genitalia and uterus palpate as normal. There is moderate right adnexal tenderness with palpation. Quantitative human  $\beta$ -corticotropin gonadotropin is 2300 mIU/mL, and transvaginal sonogram displays an empty uterus and some free fluid in the cul-de-sac.

**1- What is the most likely diagnosis?**

**2- What is the cause of the hypotension?**

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### Case 5: (**PROLAPSED LUMBAR NUCLEUS PULPOSUS**)

A 54-year-old man complains of lower back pain that radiates down the back of his right leg. He states that the pain is worsened by coughing or lifting but relieved by lying down. He denies trauma to his back. On examination, the strength and sensation of his lower extremities are normal. During the examination, while the patient is lying on his back (supine), the patient complains of severe pain when his right leg is raised by the clinician.

**1- What is the most likely diagnosis?**

**2- What is the anatomical mechanism for this condition?**