

Overview

Students will be assigned to complete the following case studies as listed below to connect theory to practice. Students will be assigned specific questions and answers are to be placed on the discussion board. Please see the discussion board to find names associated with the case studies. Students not assigned to case studies will post a "memory help" to the discussion board AND will post a review on at least two case study answers.

Sensory Case Studies

Conductive Hearing Loss Case Study

R.Y., 78yo female, presents to the clinic with significant hearing to the left ear and fluctuating hearing loss to the right ear. R.Y. was recently at the clinic 4 weeks ago for a sinus infection and has seasonal allergies. R.Y. has a history of depression and GERD and has taken 50mg sertraline daily and 10mg omeprazole daily for approximately 10 years. Otolaryngology examination reveals impacted cerumen. A Rinne and Weber test were performed and are consistent with conductive hearing loss. No vertigo reported. R.Y. reports, "The hearing to my left ear seemed to get worse progressively around the time of the sinus infection. I just thought it would clear up but now my right ear is starting not hear well so now I'm a little worried." Cerumen is cleared by the provider at the time of the office visit.

1. What findings would be expected with the Rinne and Weber test? Why?
2. How should the nurse communicate with R.Y.? Would speaking louder at a regular cadence be advisable? Why or why not?
3. What are some common causes of conductive hearing loss? Is R.Y. at risk for conductive hearing loss other than her impacted cerumen? How will the nurse educate R.Y. to care for her ears and ear canal?

Sensorineural Hearing Loss Case Study

P.W., 32yo male, presents to the clinic for new onset of bilateral tinnitus and fluctuating hearing loss. Medical history reveals treatment for testicular cancer 2 years ago with cisplatin. P.W. reports he "pulled his back" at work approximately a month ago and has been taking oral aspirin OTC on a regular basis since then to relieve his chronic back pain. He is not able to provide the nurse with the dosage of aspirin taken but states, "I take a few pills of aspirin throughout the day when it really flares up." Denies rhinitis and cough. Tympanic membranes are pearl grey. No vertigo. A Rinne and Weber test are performed. Lab results reveal elevated creatinine, elevated BUN, and GFR of 43.

1. What would be an expected finding for the Rinne and Weber test that are consistent with neurosensory hearing loss? Why?
2. P.W.'s neurosensory hearing loss is most likely related to ototoxicity. Why? What findings support this? Does he have any other risk factors for neurosensory hearing loss? Why is the hearing loss not likely to be associated with Meniere's disease?
3. What education does P.W. need today to help him minimize neurosensory hearing loss? Beyond cisplatin and aspirin, list 4 other medications are known to be associated with the adverse reaction of ototoxicity?

Cataract Case Study

C.V., 76yo female, presents for cataract surgery of the left eye. C.V. has been healthy and other than a tonsillectomy as a child, has never had surgery and takes no medications except for a multivitamin daily. She eats a Mediterranean-based diet and enjoys using produce from her garden. C.V. takes daily walks and is very active with volunteering in her community. She lives at home alone and does all her own housework and yard work. C.V. states, "I'm a little worried this morning about the surgery. I really didn't want to have the procedure but my friends convinced me it's fairly simple and they had great success so I'm here and ready to get back to seeing like a young person. I don't like being reliant on other folks but I'm ready to see better - especially at night. I can't believe I've had to use a magnifying glass to read the paper! I've always been so healthy." C.V. had her son bring her to

the surgery center and he will be bringing her home and staying with her overnight at her house tonight. He will also bring her to the ophthalmologist's clinic for all follow up appointments.

1. What is the likely etiology of cataract development for C.V.? What signs and symptoms does she display?
2. What should C.V. be taught prior to surgery? Who should be included?
3. What are essential post-op educational points CV must be aware of to promote healing and keep her IOP within normal limits? Does C.V. need to alter her diet? Why or why not?
4. C.V. is to receive phenylephrine prior to surgery to dilate her eye. How does this medication work? Are there any concerns the nurse would have when administering this medication?

Open Angle Glaucoma Case Study

R.K., 53yo male, was admitted to the med/surg unit for medical management of left lower lobe pneumonia. Upon review of the physician's H&P notes, the nurse finds R.K. has co-morbidities of diabetes mellitus type 2 and glaucoma. Reviewing medications ordered for this hospital admission the nurse finds the following: levofloxacin IV and SSI of insulin aspart SQ. The nurse asks R.K. how he is being treated with his glaucoma. R.K. states, "I use daily eye drops the ophthalmologist prescribed a few years ago. I think the name is timolol. I guess I don't need to take it while I'm here?" R.K. reports, "I didn't know I had glaucoma till I was in a car accident. There was a car that came out of nowhere at the 4 way stop and fortunately, neither one of us were hurt too much but my wife made me go have my vision checked. Sure enough, I had lost some of my vision and I didn't even know it."

1. What are R.K.'s risk factors for developing glaucoma? Does R.K. have open or closed angle glaucoma? Why?
2. Given R.K.'s history of glaucoma, what action should the nurse take to preserve his visual function? Why?
3. When administering timolol, what does the nurse need to assess prior to administration? What systemic side effects are associated with ophthalmic timolol?

Closed Angle Glaucoma Case Study

J.R., 29yo female, presented to the ED with bilateral blurry vision and headache. J.R. reports, "I've been noticing a progressive decrease in distance vision all day and when I couldn't see the whiteboard across the room, I became very worried. I've also had faint halos when looking at bright lights today. I've had recurring migraines and so thought this was maybe the beginning of one but this feels different." J.R. began taking topiramate 10 days prior for headaches; the dose of this medication was doubled the day before onset of symptoms. J.R. also reported developing a skin rash several days after starting topiramate, for which an outside provider prescribed oral prednisone. After examination by an ophthalmologist, closed angle glaucoma was diagnosed. J.R. was started on ophthalmic eye drops of timolol 0.25% twice daily, brimonidine 0.2% three times daily, prednisolone acetate 1% four times daily, and cyclopentolate 1% twice daily OU.

1. What are the signs and symptoms for JR consistent with closed angle glaucoma? How are these different than open angle glaucoma? Why?
2. What education does the nurse need to provide about brimonidine?
3. What education does the nurse need to provide about cyclopentolate?

Macular Degeneration Case Study

P.T., 67yo male, presents to the hospital with cholelithiasis and has been scheduled for a cholecystectomy tomorrow morning. He has a hx of macular degeneration (x5 years) with the following co-morbidities: hypertriglyceridemia, hypercholesterolemia, and HTN (x10 years). His home meds reveal he takes an omega 3, statin, and an ace inhibitor daily. P.T. owns a local restaurant and eats there daily for lunch as he does not enjoy cooking at home. He works long hours and is keenly interested on when he can return to work. He has signed his consent form but states, "I don't see very well so I'm not going to try and bother reading this sheet about the procedure. Could you just tell me about it?"

1. Given P.T.'s health history, where would the nurse stand/sit in the room to be able to communicate best with him? Why? How should the nurse provide education for P.T.?
2. What type of diet would be beneficial for P.T.? Create a 3-day meal plan.
3. What are P.T.'s risk factors for development of MD? When reading the providers H&P, the nurse notes the hx of macular degeneration. How can the nurse differentiate whether or not the MD is dry or wet?