Health and medical – endocrinology and neurology

Name

Institution

**Endocrinology**

Endocrinology is a branch of medicine and biology that deals with the endocrine system, hormones, and diseases related to the system. The endocrine system is responsible for controlling hormones (Joshi, Whitelaw, & Carroll, 2018). Physicians who treat people suffering from hormonal imbalances, especially from glands in the endocrine system and related cancers, are called endocrinologists. Various body organs of the endocrine system include the thyroid, pituitary, ovaries, adrenals, pancreas, and testes (Joshi, Whitelaw, & Carroll, 2018). Endocrinology involves the diagnosis and treatment of diseases in the endocrine system. Endocrine disorders result from too high or too low hormone levels or abnormal body responses to the hormones. The most common endocrine disease in America is diabetes. Other endocrinology diseases include thyroid disease, cancer, obesity, bone problems, pituitary conditions, hypertension, and infertility (Joshi, Whitelaw, & Carroll, 2018).

A wide variety of clinical procedures are performed by an endocrinologist, such as screening and diagnostic tests for hormonal and endocrine health problems. The clinical methods used for diagnosing problems in the endocrine system include urine tests to identify other issues such as kidney-related health problems. The strategies aim to manage and treat endocrine diseases that are treatable and blood tests, including blood glucose tests, blood chemistries, and blood levels. Radiological diagnostic services for endocrinology include ultrasound which is used to detect fluid or masses in soft tissues. It is more effective in evaluating lymph nodes in the neck, thyroid nodules, and in the identification of enlarged parathyroid glands. Computerized Tomography (CT) scan is also recommended for imaging to generate detailed images of the neck, chest, and abdomen (Joshi, Whitelaw, & Carroll, 2018). Another radiology performed is the endoscopic ultrasound, where an ultrasound probe is inserted in the duodenum and stomach to see the pancreas and its surrounding structures. Another major test performed biopsies, including Fine Needle Aspiration (FNA) (Joshi, Whitelaw, & Carroll, 2018). In this case, a thin needle is inserted in the area of interest to remove cells and spread them on a slide using ultrasound guidance to identify the diagnosis.

**Neurology**

Neurology is a branch of science and medicine that deals with the study and treatment of nervous system disorders. The nervous system is a complex and sophisticated system that coordinates and regulates body activities (Erkkinen, Kim, & Geschwind, 2018). The specialized physicians that treat diseases of the brain and spinal cord, muscles, and peripheral nerves are neurologists. The two main divisions of the nervous system are the brain and the spinal cord. The neurology department deals with diagnosing and treating all diseases and conditions that involve the peripheral and central nervous systems, including blood vessels, their coverings, and effector tissue such as the muscles. The most common neurological disorder is a headache. There are different types of headaches which include, migraines, tension, and cluster headaches. Stroke is another disorder associated with risk factors such as heart disease and diabetes. Other conditions include seizures, Parkinson’s disease, and dementia (Erkkinen, Kim, & Geschwind, 2018).

Neurologists perform typical neurological procedures. At the first visit, neurologists perform a physical and neurological exam. Afterward, a variety of procedures are conducted to diagnose and treat various neurological conditions. Lumbar puncture is one of the procurers that effectively test the spinal fluid (Erkkinen, Kim, & Geschwind, 2018). A needle is inserted into the spine after it is numbed to take a sample of spinal fluid. Another procedure is the tensilon test which helps the neurologist diagnose myasthenia gravis. Another necessary procedure is electromyography (EMG) which measures the electrical activity between the brain and the spinal cord (Erkkinen, Kim, & Geschwind, 2018). EMG helps the neurologist to diagnose diseases of the spinal cord and nerve or muscle dysfunction. Also, an electroencephalogram (EEG) is conducted to help diagnose brain conditions, including tumors and injuries and psychiatric and seizure disorders. Neurologists use radiological diagnostic and imaging services such as computed tomography (CT) scan, magnetic resonance imaging (MRI) scan, and positron emission (PET) scan (Erkkinen, Kim, & Geschwind, 2018). Other procedures include angiography, which is used to determine blood clots and blockages in the brain vessels.

References

Erkkinen, M. G., Kim, M. O., & Geschwind, M. D. (2018). Clinical neurology and epidemiology of the major neurodegenerative diseases. *Cold Spring Harbor perspectives in biology*, *10*(4), a033118.

Joshi, M. N., Whitelaw, B. C., & Carroll, P. V. (2018). Mechanisms in endocrinology: hypophysitis: diagnosis and treatment. *European journal of endocrinology*, *179*(3), R151-R163.