#### UTI and Hypothyroidism

#### Urinary Tract Infection

Urinary tract infection (UTI) is described as the invasion of a functionally and structurally normal urinary tract by bacteria that gains entry to the urinary tract via the urethra and starts to divide in the bladder (Gleckman, 2016). The major symptoms of the infection include cloudy urine, pelvic pain in women, urge to urinate, strong-smelling urine and burning sensation when urinating. However, UTI is an acute illness and the prevalence is much higher in women than men. Almost 150 million individuals are diagnosed with UTI in the world every year (Foxman & Buxton, 2013). 10 percent of all women in the globe get UTI annually and 50 percent have at least a single infection in their life (Gleckman, 2016). The condition is frequent to women between the age of 35 and 16 years and relapse is common. Besides, women are prone to urinary tract infection since they have shorter urethra that allows bacteria such as Escherichia coli from the large intestine to access the bladder easily (Maki et al., 2016).

#### Health Promotion and Screening

There are various health promotion measures that help women to control, prevent and manage urinary tract infection. The measures include medications, diet, clothing, hygiene and activities. Hygiene entails changing inner wear everyday or after physical exercise as well as wiping from front to back (Gleckman, 2016). Wearing of tight fighting underclothes that are made of non-breathing materials is prohibited to prevent maceration of the skin. Drinking more water at least 8 glasses per day is healthier since it increases urination which helps to flush out the bacteria. Besides, the screening for UTI is conducted through urinalysis which is the test that examines a portion of urine and can identify several illnesses. It is recommended that women should go for UTI screening after every three months for early interventions (Gleckman, 2016).

## Diagnosis

Test for urinary tract infection are requested by the doctor after he or she suspects the presence of UTI infection depending on the patient's symptoms. The procedures and test used to diagnose UTI comprise of urinalysis, establishing urinary tract image, urine culture and the use of scope to assess the bladder (Gleckman, 2016). Urinalysis entails the examination of the urine sample to check for microbes, lymphocytes or red blood cells. The urinalysis procedure looks to have an evidence of bacteria or white blood cells that explain the existence if the infection. Urine culture is carried out in the recurrent cases which tell the type of bacteria that is causing the infection and effective medications (Gleckman, 2016). The images of the urinary tract that illustrate abnormality can be done with the use of magnetic resonance imaging, computerized tomography

scan and ultrasound. Likewise, the cystoscope is penetrated in the urethra and passed to the bladder to enable cystoscopy.

## Treatment and Management

The remedy for UTI in female entails a short course of antibiotics of three-day tablets or capsules. Secondly, the management comprises of maintaining hygiene, drinking more water, urinating immediately after the urge as well as regular physical activities (Foxman & Buxton, 2013). Medicines that are prescribed for simple UTIs are cephalexin, monurol, Cipro and Rocephin while frequent infections are treated with vaginal estrogen therapy, single antibiotic dose after sex and low antibiotic dose for six months. However, severe UTI is treated by the use of intravenous antibiotic in the healthcare facility (Altarac & Papeš, 2014).

## Patient Education and Follow-up

Patient education for UTI includes the symptoms, causes, treatment and prevention measures. Patients should be educated on the causes and good personal hygiene that include changing the inner clothes, regular baths and wiping from front to back. Also, drink plenty of water to assist in flushing the bacteria and emptying bladder completely immediately when the urge for urination arises at least after three hours. Furthermore, take a lot of vitamin C by eating citrus fruits which makes the urine acidic thus killing the bacteria (Foxman & Buxton, 2013). Moreover, wear cotton underwear since cotton does not catch moisture. A frequent follow-up urine portion is recommended after treating UTI to prevent the disease recurring. Moreover, follow-up should be arranged via phone after 24 hours of treatment to monitor the reaction to the therapy and 48 hours to modify the remedy if the outcomes of antibacterial sensitivity illustrate the need for adjustment (Foxman & Buxton, 2013). Moreover, 7 to 10 days follow-up should be arranged to evaluate the patient's medical course.

# Traditional and Nontraditional Treatment

The traditional treatment of UTI entails the use of antibiotic and the duration and type depends on the group of bacterium and health condition present in the urine. Common antibiotics prescribed include ampicillin, amoxicillin, Cipro, and Bactrim (Foxman & Buxton, 2013). On the other hand, the nontraditional remedies entail taking cranberry products, D-mannose and alkalinizing the urine (Maki et al., 2016). Besides, drugs used in traditional therapy are not necessary and can cause other problems in future since they may destroy beneficial bacteria that are responsible for preventing pathogenic bacteria. Also, medication do very little to avert the recurrence of the infection since they only fix the issue for a short term (Altarac & Papeš, 2014). Conversely, nontraditional remedies provide a long-term solution for the UTI since they have the infection-fighting properties that hinder the growth of bacteria with less or no destruction of the beneficial bacteria in the body (Maki et al., 2016).

# Hypothyroidism

Hypothyroidism refers to the malady of endocrine system where thyroid gland produces inadequate thyroid hormone due to iodine deficiency. The disorder is a chronic disease manifested by various symptoms comprising of puffy face, weight gain, fatigue, constipation, diminished sex life and brittle hair (Benito, 2015). Moreover hypothyroidism is associated with depression, impaired memory, high blood cholesterol and decreased heart rate. It is estimated that above one billion people globally have iodine deficiency and 80 percents are women (Dunn & Turner, 2016). Females have 5 to 8 times chances to develop hypothyroidism than men. However, women are vulnerable to hypothyroidism because of increased iodine need during pregnancy, various hormonal leaps and their bodies are sensitive to hormone adjustments and respond to the changes sharply than male body (Dunn & Turner, 2016). Other causes of hypothyroidism include radiation therapy, particular medications, autoimmune illness, thyroid surgery and remedy for hyperthyroidism. The disease leads to heart problems, pregnancy complication, goiter, and myxoedema coma.

## Health Promotion and Screening

Health promotion for hypothyroidism entails the use of diet that is rich in iodine hence preventing iodine deficiency. Moreover, iodization of table salt is recommended to ensure that all women from distinct social classes are able to consume iodine (Benito, 2015). Additionally, proper nutrition during pregnancy is necessary since pregnancy is a risk factor that predisposes women to hypothyroidism. The screening of hypothyroidism entails the blood test that evaluates the level of hormones such as thyroxine and triiodothyronine. Screening for hypothyroidism in women is important starting at the age of 35 years and continued after every 5 years (Azizi et al., 2014). Moreover, older women who are above 60 years and those with the family history of the infection should be screened regularly. In addition, pregnant and women who are planning to become pregnant are screened for hypothyroidism.

## Diagnosis

The diagnosis of hypothyroidism is done by conducting the thyroid function test that measures the hormone levels in the blood. The evaluation assesses the levels of thyroxine and thyroid-stimulating hormones in the blood (Azizi et al., 2014). Low levels of thyroxine and elevated thyroid-stimulating hormone indicates the presence of hypothyroidism. However, normal thyroxine levels but raised thyroid-stimulating hormone illustrates that the patient is at risk of developing the condition. Repeated blood test is recommended to check the development

of underactive thyroid (Azizi et al., 2014). Moreover, the thyroid function test helps the doctor to make the choice on the correct dosage to be used at the initial stage and for a long time.

## Treatment and Management

The remedy aims for hypothyroidism are to correct metabolic abnormality and reverse the clinical processes that are evidenced by correct levels of thyroxine and thyroid-stimulating hormones. Administration of a daily hormone substitution known as levothyroxine is used to treat the condition (Lee, Braverman, & Pearce , 2014). Full replacement doses are started to people who are healthy and young while older women and those identified with heart disease are given half or quarter of the expected dose for 4-6 weeks. However, several cases of moderate to mild hypothyroidism are managed with the initial dose of levothyroxine being 50-75 micrograms per day (Lee et al., 2014). The benefits of the treatment are achieved after 3 to 5 days of treatment but attaining the correct levels of hormones can take several months due to the delayed readaptation. Low doses of levothyroxine are administered at the initial phase of management and increased later depending on the body reaction.

## Patient Education and Follow-up

Patient education of the hypothyroidism condition comprises of information that enlightens the client on the causes, symptoms, complications, risk factors and best ways of treatment. A regular screening for hypothyroidism is necessary especially in women who are above 35 years and those who have been pregnant (Benito, 2015). It is important to note the signs and symptoms of hypothyroidism for the purpose of seeking early medical attention to avoid severe complications. Proper diet that entails foods rich in iodine as well as using table salt to cook food prevents the development of hypothyroidism (Dunn & Turner, 2016). Pregnant women should be screened for iodine deficiency within the first three months. On the matter of follow-up, the health provider should arrange for the follow-up at 3-5 days to check the patient's reaction on the levothyroxine and clinical benefits (Azizi et al., 2014). Frequent blood test with an interval of one month is necessary to monitor the progression of the condition.

# Traditional and Nontraditional Treatment

The traditional treatment for hypothyroidism entails the administration of levothyroxine which helps to restore the level of reduced thyroxine hormone. On the other hand, the nontraditional methods for managing hypothyroidism comprise of daily self-care and nutrition (Dunn & Turner, 2016). Consuming foods that are rich iodine and vitamin B reduces the risks for developing the condition. The use of levothyroxine is dependent on the age and healthy of the patient and the impacts are witnessed after 3 to 5 days. Moreover, the use of replacement hormone takes time to restore the function of the thyroid gland. In opposition, good nutrition, practicing deep breathing

and daily exercises have got long term effects and prevents the relapse of hypothyroidism (Dunn & Turner, 2016).

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