**INTRODUCTION:**

Pituitary dwarfism is often complicated by disorders related to the reduced production of pituitary hormones. Females with pituitary dwarfism and a multiple deficiency of pituitary hormones show ovarian dysfunction due to hypogonadotropism.\(^1\) Such patients would be expected to respond favorably to treatment with human gonadotropins.\(^1\) A thorough history and physical examination as well as laboratory testing can help narrow the differential diagnosis of amenorrhea.\(^2\) Patients with primary amenorrhea, the presence or absence of sexual development should direct the evaluation. Constitutional delay of growth and puberty commonly causes primary amenorrhea. Primary amenorrhea can be diagnosed if a patient has normal secondary sexual characteristics but no menarche by 16 years of age.\(^3\) If a patient has no secondary sexual characteristics and no menarche, primary amenorrhea can be diagnosed as early as 14 years of age.\(^3\) The normal menstrual cycle involves a complex interaction between the hypothalamic pituitary-ovarian axis and the outflow tract.\(^4\) Any disruption in this interaction can cause amenorrhea.\(^5\) The treatment of primary and secondary amenorrhea is based on the causative factors that are Hyperprolactinemia, Empty sella syndrome, pituitary adenoma, enzymatic metabolism, liver failure, renal failure, gonadoblastoma, hypergonadotropic, hypogonadism, postmenopausal ovarian failure, premature ovarian failure, congenital androgen insensitivity syndrome and Mullerian agenesis and others pregnancy, thyroid disease.\(^6\)\(^10\)

**CASE REPORT:**

A 16-year-old female patient admitted in general medicine department with chief complaints of shortness of breath on exertion since 15 days, swelling of both legs since 10 days, loss of weight since 5 months, loss of appetite since 3 months, history of pain during swallowing. Pelvis scan examination reveals that uterus measures 3.2×0.5×0.5cm; uterus is hypoplastic, ovaries not visualized. Patient parents revealed that from patient birth to 11 years of age her growth and other developments were normal, after that her growth is stopped and no changes were observed in development since 5 years. Patient has hypothyroidism so pituitary gland make an important role to maintain hormone levels, pituitary gland produces thyroid stimulating hormone (TSH) which stimulates thyroid gland to produce thyroid hormones. Primary Amenorrhea, short stature and poorly developed secondary sexual characters which could have been contributed and should be subjected for karyotyping. This type of Pituitary Dwarfism is very difficult to manage.

**Keywords:** Pituitary Dwarfism, Primary Amenorrhea, Thyroid Stimulating Hormone, Hypogonadotropism.
regimen imagine). CT (computerized tomography) brain, USG (ultra sound sonography) abdomen were also performed. She was treated with B-complex and Iron Folic Acid for vitamin supplement, sucralfate for prevention of gastric irritation, furosemide for increasing urine output. Ampicillin 250mg, pantoprazole 40mg and injection human albumin were also given to the patient. After 2 months she was died with unknown reasons.

DISCUSSION:

Pituitary dwarfism is a condition of growth retardation characterized by abnormally short stature with normal body proportions in which the pituitary gland does not make enough growth hormone. Primary amenorrhea is the absence of menstruation. Menstruation is a woman's monthly period, amenorrhea is of two types primary amenorrhea and secondary amenorrhea. Primary amenorrhea is when a girl has not yet started her monthly periods; it can be diagnosed if a patient has normal secondary sexual characteristics but no menarche by 16 years of age. The patient has no secondary sexual characteristics and no menarche; primary amenorrhea can be diagnosed as early as 14 years of age. As this patient is not yet started her monthly periods, physicians confirm the diagnosis as pituitary dwarfism with primary amenorrhea. The treatment is given with furosemide as the patient having edema, B-complex as a vitamin supplement because patient is not taking sufficient food. While taking food she feels abdominal distention so for further supplement physician prescribe B-complex. IFA (iron and folic acid) is prescribed to this patient to improve hemoglobin levels as pallor and low hemoglobin levels are observed. Pantoprazole is prescribed to prevent gastric irritation, which may be due to ingestion of various medications. Sucralfate started on fifth day because patient feels abdominal discomfort and belching recurrently, Sucralfate acts as ulcer protective. After one month patient has not recovered so the treatment is changed with other category of drugs like Sucralfate replaced by aluminum and magnesium hydroxide syrup, B-complex replaced by B-complex, nicotinamide and pantoprotein. Human albumin for fluid carrying protein, here patient serum Bilirubin concentration is 0.9mg% normal range of Bilirubin is <2mg%. The additional treatment includes depending on cause progestin therapy, MOPA, nor-ethindrone acetate, low dose of oral contraceptive pills, For gonadotropins treatment oral MOPA 1-12 days, low dose of oral contraceptive pills, anti-prolactin therapy, thyroid hormones and growth hormones.

CONCLUSION:

These types of patients needs early evaluation of hormones around 14years and should be diagnosed and treated early. Constitutional delay of growth and puberty commonly causes primary amenorrhea. Primary amenorrhea is an uncommon presentation in clinical medicine. Any symptoms of Primary Amenorrhea, short stature and poorly developed secondary sexual characters which could have been contributed and should be subjected for karyotyping. Karyotyping decides these critical regions and thus various congenital malformations can be observed for the chromosomal abnormalities. Dwarfism has been known throughout recorded history, but the relation of the pituitary to certain kinds of dwarfism has been recognized only recently. This type of Pituitary Dwarfism needs treatment with multiple hormones, many continuous, some intermittent (Luteinizing hormone, Growth hormone) and infections may prevent due to lack of inflammatory effect of steroid hormones, so careful antibiotic selection and nutritional supplements need to be given.

REFERENCES:

Siva et al., female patient with Amenorrhoea and Dwarfism