## INTRODUCTION:

Gynecomastia, is a benign enlargement of the male breast. It is a benign condition that accounts for 60% of all disorders of the male breast and 85% of male breast masses. It can occur in persons of any age, but 40% of cases occur in adolescent boys aged 14-15.5 years. Approximately 40% of healthy men and up to 70% of hospitalized men have palpable breast tissue. The prevalence rate increases to more than 60% in those in the seventh decade of life. [(1)]

The breast tissues of both sexes appear histologically identical at birth and remain relatively quiescent during childhood, undergoing further differentiation at the time of puberty. In the majority of males, transient proliferation of the ducts and surrounding mesenchymal tissue takes place during the period of rapid sexual maturation, followed by involution and ultimately atrophy of the ducts. In contrast, the breast ductal and periductal tissues in females continue to enlarge and develop terminal acini, which require both estrogen and progesterone. Since estrogens stimulate breast tissue whereas androgens antagonize these effects, gynecomastia has long been considered the result of an imbalance between these hormones. [(2)]

The disease may be physiological or pathologic. Physiological gynecomastia occurs most frequently during times of male hormonal changes that occur during three periods in life: in newborns, in puberty and with aging. In cases of newborn enlargement, maternal or placental estrogens are the underlying cause. Newborn gynecomastia usually resolves within the first few weeks post-delivery. Pubertal male breast-tissue

enlargement occurs in about 60-70% of adolescents, with onset at a median age of 14 years. In approximately 90% of patients, pubertal gynecomastia resolves spontaneouslys within a few months to years. The condition may or may not be associated with any functional deficit, such as pain. Patients who develop significant pain or tenderness may be suitable candidates for medical therapy. Most cases of physiological gynecomastia are considered normal findings, requiring no treatment. [3]

Pathologic gynecomastia is associated with androgen deficiency and/or estrogen excess and may result from the use of medications (e.g., estrogens, androgens, calcium channel blockers, antihypertensives, digitalis preparations, aldactone), endocrine abnormalities (e.g., hyperthyroidism), tumors, chronic disease (e.g., cirrhosis of the liver), chromosomal abnormalities (e.g., Klinefelter's syndrome) and other familial disorders. Men who use anabolic steroids to enhance athletic performance often demonstrate gynecomastia. Gynecomastia has been reported to be a common side effect of certain therapies for prostate cancer, including non-steroidal anti-androgen monotherapy. The use of illegal drugs such as marijuana, heroin, methadone and alcohol, have also been linked to gynecomastia. [3]

Although commonly bilateral and symmetric, gynecomastia of any cause may be unilateral or asymmetric. Unilateral gynecomastia seems to be more common on the left side. Gynecomastia is often asymptomatic and may be an incidental finding on routine examination, since palpable breast tissue is so prevalent in the normal male population, an otherwise healthy man with asymptomatic, incidentally discovered gynecomastia should not be subjected to an exhaustive endocrine evaluation. [4]

Treatment of gynecomastia consists of medical management to correct the underlying disorder. [5] When gynecomastia does not respond to conservative treatment or a period of observation for spontaneous regression, or if profound psychological distress occurs, surgical correction is warranted. [6] Surgical treatment involves removing the glandular breast tissue and is generally reserved for patients who demonstrate irreversible fibrotic changes, continued growth and pain. Procedures commonly used in the treatment of gynecomastia were used aiming at the best cosmotic results with preservation of the nipple and areola. Suction-assisted lipectomy has been performed as an adjunct procedure in some cases, although its use is limited in cases that are severe or in breasts that are fibrous. Ultrasound-assisted suction lipectomy has recently emerged as a proposed method of treatment for gynecomastia. Proponents contend it improves the removal of dense, fibrous male breast tissue and offers minimal external scarring. [5]

## AIM OF THE ESSAY:

The aim of this essay is to review the recent trends in the surgical management of gynecomastia.