



## AN ANALYTICAL STUDY OF PREVALANCE &amp; INCIDENCE OF GYNECOMASTIA

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**ABSTRACT** Gynecomastia, a benign enlargement of male breast may be uni or bilateral. Though the cause could be many, ruling out the drug induced & hormonal causes, the food habits, life style could contribute to the increasing level of obesity in our population. Obesity by itself is determined by the abnormal BMI. As the fat has the tendency to get accumulated in the loose adipose tissue, which in male is also concentrated in the areolar & sub areolar region. Deposition of fat in this region leads to gynecomastia. And these are areas of hormonal conversion, causing infertility at later ages. In this study we have analyzed the age wise distribution, socio economic status and lifestyle that influences the incidence of gynecomastia. On observation the mean age of the patients was observed to be around 23 years, of which 98.6% had bilateral gynecomastia. 71% were from high socio- economic group and 90% were from urban areas. 40% of patients were overweight and 35% were obese. Students ranging from school to college goers contributes 53.3%. Whether this could be due to the increased stress levels infused on them at an earlier stage, leading to altered eating and food habits and sedentary lifestyle.

**KEYWORDS :****INTRODUCTION :**

Gynecomastia is a benign enlargement of the male breast, caused by the proliferation of glandular breast tissue.<sup>(1,2)</sup> It is usually bilateral. If unilateral, male breast cancer should be ruled out. Physiological gynecomastia occurs normally in neonates and pubertal boys. The prevalence of asymptomatic gynecomastia is 60% to 90% in neonates, 50% to 60% in adolescents, and up to 70% in men aged 50 to 69 years.<sup>(3,4)</sup> Gynecomastia may present as early as age 10, with a peak onset between the ages of 13 and 14 years, followed by a decline of incidence in late teenage years.<sup>(5)</sup> By age 17, only 10% of boys are found to have persistent gynecomastia.<sup>(6)</sup>

Pathological gynecomastia may result from excessive estrogen or deficiency / resistance of androgen. Gynecomastia often accompanies nutritional disorders, in particular during nutritional repletion after a period of starvation and weight loss (Refeeding gynecomastia).<sup>(7)</sup> In a number of cases of adult onset gynecomastia, the cause remains idiopathic. Gynecomastia may cause significant embarrassment and psychological distress in affected males. Hence this study aims at evaluating the causes of gynecomastia, its prevalence and age wise distribution in a tertiary care hospital.

**METHODOLOGY :**

After obtaining Institutional Ethical Committee clearance, this retrospective analytical study was conducted in the Department of Plastic surgery, GRH, Madurai over a period of 3 years (March 2014-February 2017). Males above 10 years were included in the study. Patients with cardiac, renal & hepatic insufficiency, with hormonal imbalance, confirmed carcinoma breast were all excluded from the study. The diagnostic criterion has been defined as a palpable mass of sub-areolar breast tissue measuring at least 0.5 cm, 1 cm, or 2 cm by different investigators.<sup>(7,8)</sup> Patients details like age, education, occupation, social status, hobbies, dietary pattern were registered. BMI was calculated. The rate of prevalence was estimated statistically by Chi-square test. Pvalue <0.05 was

**RESULTS :**

Totally 60 cases were registered during the study period. Their age ranged from 14 -49 years (Mean± SD -23.45±6.45). (Figure – 1). 58 (96.6 %) had bilateral and 2 (3.4 %) had unilateral gynecomastia. All were asymptomatic. All were educated (Figure – 2). 43 patients were from high socio- economic group, 17 were from middle socio-economic group (Figure – 3). On analyzing the dwelling place from where these patients reported, it was observed that 54 patients were from urban and 6 from rural areas (Figure – 4). BMI of 15 patients were normal, 24 were overweight, 18 were with class I obesity, 2 with class II and 1 with class III obesity (Figure – 5). 1 patient was a Gym Instructor and was on energy boosters and anabolics.

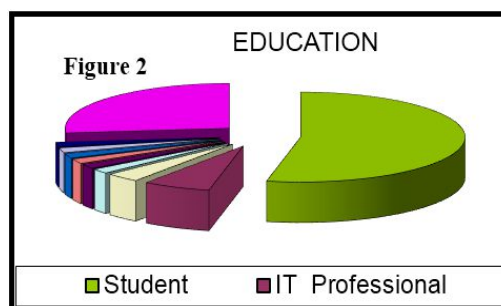
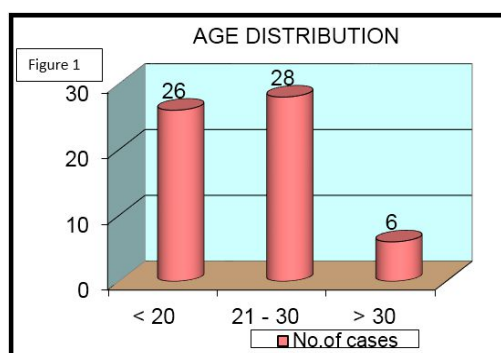
**DISCUSSION :**

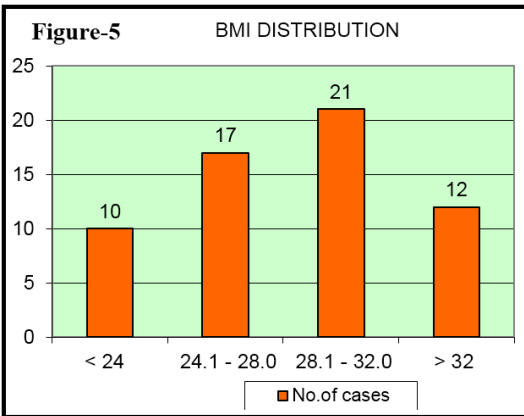
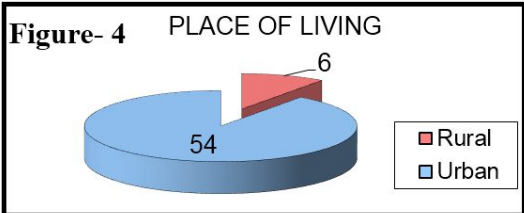
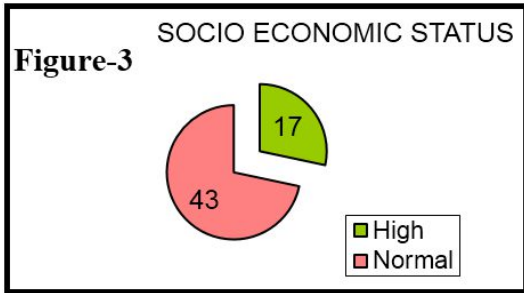
Gynecomastia in adolescents occurs at a sensitive time when boys are increasingly aware of their self-image; they may question health care

providers about the role of pharmacological or surgical therapies. As Per Geffner et al., by the age of 17, only 10% of boys were found to have persistent gynecomastia. In our study, 43.3% of less than 20 years were with gynecomastia. 46.7% were around 21-30 years. 53.3% were students.

When gynecomastia in adolescents persists for more than one year, surgical management may be considered. In 1946, Webster was the first to abandon extra-areolar skin incisions in favour of a semicircular intra-areolar incision.<sup>(12,13)</sup> Current surgical techniques favour standard suction-assisted lipectomy (SAL) and ultrasound-assisted liposuction (UAL)<sup>(14)</sup> over excisional techniques, with the advantage of creating smaller scars. Other surgeons have used the pull-through technique successfully with UAL<sup>(15)</sup> or power-assisted liposuction (PAL).<sup>(16)</sup>

Overall, surgical treatment of gynecomastia appears to provide satisfactory results. Pharmacological treatment is not recommended for adolescents suffering from gynecomastia, based on the paucity of data on risks and benefits. From this study, it was found that stress was a major factor leading to altered dietary pattern which in turn leads to increased incidence of gynecomastia. Hence steps should be taken to reduce the stress levels among younger age group.





**REFERENCES:**

- Braunstein GD. Clinical practice: gynecomastia. *N Engl J med.* 2007; 357(12):1229-1237.
- Johnson RE, Murad MH. Gynecomastia: Pathophysiology, evaluation and management. *Mayo clinic Proc.* 2009; 84(11): 1010–1015.
- Braunstein G D. Gynecomastia. *N Engl J Med.* 1993;328(7):490-495
- Ma N S, Geffner M E. Gynecomastia in prepubertal and pubertal men. *Curr Opin Pediatr.* 2008;20(4):465–470.
- Alvin M, Matsumoto, William J, Bremner. Testicular disorders. *Williams textbook of endocrinology*; 2016; 13th Ed. 725.
- Kumanov P, Deepinder F, Robeva R, Tomova A, Li J, Agarwal A. Relationship of adolescent gynecomastia with varicocele and somatometric parameters: a cross-sectional study in 6200 healthy boys. *J Adolesc Health.* 2007;41(2):126–131.
- Narula HS, Carleon HE. Gynecomastia – Pathophysiology, diagnosis and treatment. *Nat Rev Endocrinol.* 2014; 10(11): 684–698.
- Nydick M, Bustos J, Dale J H Jr, Rawson R W. Gynecomastia in adolescent boys. *JAMA.* 1961;178:449–454.
- Beckenstein M S, Windle B H, Stroup R T Jr. Anatomical parameters for nipple position and areolar diameter in males. *Ann Plast Surg.* 1996;36(1):33–36
- Murphy T P, Ehrlichman R J, Seckel B R. Nipple placement in simple mastectomy with free nipple grafting for severe gynecomastia. *Plast Reconstr Surg.* 1994;94(6):818–823.
- Ma N S, Geffner M E. Gynecomastia in prepubertal and pubertal men. *Curr Opin Pediatr.* 2008;20(4):465–470.
- Fruhstorfer B H, Malata C M. A systematic approach to the surgical treatment of gynecomastia. *Br J Plast Surg.* 2003;56(3):237–246. [PubMed]
- Webster J P. Mastectomy for gynecomastia through a semicircular intra-areolar incision. *Ann Surg.* 1946;124(3):557–575.
- Rohrich R J, Ha R Y, Kenkel J M, Adams W P Jr. Classification and management of gynecomastia: defining the role of ultrasound-assisted liposuction. *Plast Reconstr Surg.* 2003;111:2909–923., discussion 924–925.
- Hammond D C, Arnold J F, Simon A M, Capraro P A. Combined use of ultrasonic liposuction with the pull-through technique for the treatment of gynecomastia. *Plast Reconstr Surg.* 2003;112:3891–895., discussion 896–897
- Lista F, Ahmad J. Power-assisted liposuction and the pull-through technique for the treatment of gynecomastia. *Plast Reconstr Surg.* 2008;121(3):740–747.