

Escitalopram-Induced Gynecomastia in a Male Youth: A Case Report and Literature Review

Rajesh K Mehta^{1*}, Rahul Tyagi² and Mallikarjuna B Ellur³

¹Department of Psychiatry, Case Western Reserve University, Cleveland, Ohio, USA

²Hackensack Meridian Ocean University Medical Center, New Jersey, USA

³Trident Health, South Carolina, USA

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***Corresponding author:** Rajesh K Mehta, Department of Psychiatry, Metro Health Medical Center, Cleveland, Ohio, USA.

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ABSTRACT

Gynecomastia is the enlargement of male breast tissue. There can be many causes for gynecomastia, and it is relatively common in young male adults. There are many causes for it to occur, some of which include hormonal imbalance, various medical conditions, drugs, and medications. In this case report, we present and discuss a case of a young adolescent male who developed gynecomastia secondary to his Escitalopram use, which was prescribed for his anxiety. This was later resolved upon cessation of escitalopram. This is a rare case as there are no documented cases of escitalopram-induced gynecomastia in researching medical literature.

Keywords: Gynecomastia; Escitalopram; Anxiety

Introduction

Gynecomastia is defined as an enlargement of male breast tissue. It is often benign and can cause significant embarrassment and psychological distress in male adolescents¹. During puberty, the average incidence of gynecomastia is up to 69%². Gynecomastia can present as early as age 10, with a peak onset between the ages of 13 and 14 years. Reassuringly by age 17, only 10% of boys are found to have persistent gynecomastia³. Causes of gynecomastia include hormonal imbalance, mainly the excess of estrogen relative to androgens, obesity, various medical ailments such as liver disease, alcoholism, adrenal tumors, thyroid disorder, and Klinefelter syndrome. Medications are also a common culprit, including steroids, cimetidine (anti-ulcer drug), phenytoin, tricyclic antidepressants (TCAs), diazepam, haloperidol, etc^{4,5}. Various medications used in psychiatry can cause gynecomastia, but Escitalopram has not been related to or shown to be a cause of gynecomastia in young adult males

upon reviewing the literature. Diagnosing and finding the cause of gynecomastia involve a detailed history, examination, imaging, and blood profile. Management depends on the cause, severity, and stage of breast tissue development. Management strategy includes waiting and watching, changing medication, medication such as tamoxifen, and surgery. Young males with persistent breast tissue can cause psychological impact during their formative stages of development and beyond; hence comprehensive discussion and management are vital to reduce further stress. This case report is about a 16-year-old male who developed bilateral gynecomastia after the initiation of Escitalopram, a selective serotonin reuptake inhibitor (SSRI).

Case Presentation

A 16-year-old male patient initially presented to the emergency department in 2021 with suicidal thoughts, acute anxiety, and abdominal pain symptoms for more than 2 months. He was assessed, his x-ray abdomen, and lab work was

normal, including a toxicology screen. He was discharged with hydroxyzine 25mg 8 hourly, as needed for anxiety.

He was followed up in the child and adolescent psychiatry clinic a week later with his parents. On this assessment, he was found to have worsening anxiety and somatic symptoms such as chest pain, arm and neck pain, and abdominal pain. He also had a constant fear of contracting Covid-19 infection. He was feeling tired but sleeping well. His concentration was poor, but he was doing well at school. He had a panic attack once a week where he felt he was “drowning”. There were no delusions or hallucinations.

His family history was negative for any psychiatric problems. His past medical history included a diagnosis of Autism at age 6. Birth and development history were insignificant.

His Screen for Child Anxiety-Related Disorder (SCARED) score on the initial assessment was 27 for the parent version and 30 for the child version, indicating an anxiety disorder. He was diagnosed as having generalized anxiety disorder (GAD) and autism spectrum disorder (ASD) level 1. Management options were discussed, and he and his parents decided to opt for starting on Escitalopram 2.5mg once nightly, which was increased to 5 mg once a night after 1 week. On subsequent follow-ups, his anxiety and panic attacks persisted, and his escitalopram dose was increased to 10 mg once a day. He scored his anxiety as 6/10 on a severity scale, with 10 being the worst anxiety. The patient responded well to escitalopram. His anxiety symptoms improved, and he became more social. He did not need to use hydroxyzine as needed. After 1.5 years on Escitalopram, he scored his anxiety as 2/10 on a severity scale, with 10 being the worst anxiety. However, the parents noticed that the patient had gained approximately 20 lbs. and developed bilateral breast enlargement.

On physical examination, he was noted to have non-tender bilateral breast enlargement without galactorrhea. The patient’s medical history was insignificant for systemic diseases. He was not taking any non-prescription medications or recreational drugs (anabolic steroids, dietary supplements, and marijuana). His family history was negative for breast cancer. After being diagnosed with gynecomastia, his escitalopram was reduced to 5 mg daily, gradually tapered him off it in next 3 month.

His lab work showed serum Prolactin- 6.6 ng/ml (2.1-15.0 ng/ml), Estradiol-28 pg/ml (19.0-35.0 pg/ml), Testosterone-298ng/dl (220-700 ng/dl), lipid profile, hepatic function, and thyroid levels were all within normal limits. On his most recent physical examination and review in 2024, the patient’s gynecomastia had improved, and his mood, anxiety, and behavior were stable. He has occasional anxiety symptoms, but this is managed with monthly psychotherapy. He is socially functioning well and is currently has part time job. His most recent SCARED child version score was 26.

Discussion

We conducted a case analysis on PubMed with keywords including escitalopram, gynecomastia, and mammoplasia. This search concluded no known documented cases of gynecomastia or mention of mammoplasia (breast tissue enlargement in women) in association with escitalopram use⁶. However, the side effects of galactorrhea have been mentioned in the literature⁷. Galactorrhea is defined as the unexpected production of milk-like discharge from the breast and can occur in both women and

men⁸. We also noted that the British National Formulary (BNF), a widely used and respected prescribing aid, also had no mention of side effects of gynecomastia for escitalopram. However, it also mentioned galactorrhea as a possible “rare or very rare” side effect⁹. This case is therefore one of a kind where Escitalopram has caused gynecomastia.

In psychiatry, many drugs are known to cause gynecomastia, especially psychotropic agents such as haloperidol, clozapine, olanzapine, etc¹⁰. SSRIs including fluoxetine, sertraline, and citalopram, and serotonin-norepinephrine reuptake inhibitors (SNRIs) noradrenaline uptake inhibitors such as duloxetine have also been implicated in cases of gynecomastia¹¹.

The primary physiological cause is the prolactin-sparing nature of many antipsychotics in favor of dopamine antagonism, leading to hyperprolactinemia¹⁰. Similarly, SSRIs and SNRIs can cause hyperprolactinemia and/or alteration of sex hormone secretion, thus resulting in gynecomastia^{11,12}.

The diagnosis and resulting treatment of gynecomastia entail a thorough history and examination. Various blood tests including serum human chorionic gonadotropin, dehydroepiandrosterone, luteinizing hormone, follicle-stimulating hormone, estradiol, testosterone, sex hormone binding globulin, prolactin, thyroid function tests, liver function tests, renal function tests, and thorough examination for possible gonadal tumors^{13,14}. For most iatrogenic causes of gynecomastia, prolactin levels are often raised, but they can also be within normal range (**Table 1**).

Table 1: Interpretation of blood results for diagnosis of gynecomastia¹⁵.

Hormone test result	Possible diagnoses
All normal	Idiopathic gynaecomastia
Low testosterone with elevated LH	Primary hypogonadism; Klinefelter’s syndrome
Low testosterone with normal LH	Pituitary/hypothalamic disease
Elevated testosterone with elevated oestradiol	Androgen exposure; testicular tumour
Elevated oestradiol with elevated SHBG	Oestrogen exposure; testicular/adrenal tumour
Elevated DHEA (dehydroepiandrosterone)	Adrenal tumour
Elevated β -hCG	Testicular/ectopic tumour
Elevated prolactin	Pituitary tumour; medicine-related cause

With regards to treatment options for gynecomastia, the etiology needs to be known for a tailored approach, which ranges from watch and wait, to medications such as Raloxifene, Tamoxifen, Anastrozole, and even surgical intervention^{13,16}. If it is medication-related then gradual tapering, cessation, and replacement by an alternative agent is recommended.

Development and persistence of gynecomastia in adolescence can cause profound psychological distress. This is backed up by a survey study of 192 male participants, of which 47 patients had a diagnosis of gynecomastia. The results showed a clear and marked negative impact on the psychosocial well-being, self-esteem, and mental health of young men with gynecomastia as compared to the control group. These findings were similar across the affected group, irrespective of the severity of gynecomastia¹⁷. This highlights the need for healthcare professionals to inquire about breast tissue growth in males regularly and address it as soon as possible. Historically breast tissue changes in both women and men due to antidepressants have been underreported, most likely due to embarrassment or since the clinician does not directly ask about such a side effect. This may also be compounded and complicated by the possible weight gain that can be observed with various antidepressants and mood disorders⁶.

Conclusion

Many psychiatric medications can cause gynecomastia, ranging from antipsychotics to SSRIs and SNRIs. Therefore, as clinicians, we must inquire directly during patient assessments if there have been any changes in breast tissue. Addressing this at an early stage will minimize the psychosocial impact that gynecomastia can have on young adults.

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Ethical Approval: This case report was conducted in accordance with the ethical standards outlined in the MetroHealth Medical Center.

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