

Precocious Puberty Presenting With Unilateral Gynaecomastia: A Case Report

John Adi Ashindoitiang*

Motayo Hospital Limited Ikeja

***Corresponding Author:** John Adi Ashindoitiang, Motayo Hospital Limited Ikeja.

Received date: 11 July 2024; **Accepted date:** 16 July 2024; **Published date:** 22 July 2024

Citation: Ashindoitiang JA (2024) Precocious Puberty Presenting With Unilateral Gynaecomastia: A Case Report. J Med Case Rep Case Series 5(09): <https://doi.org/10.38207/JMCRCS/2024/JUL05090491>

Copyright: © 2024 John Adi Ashindoitiang. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Precocious puberty is when a child's body begins changing into that of an adult (puberty) too soon. When puberty begins before age 8 in girls and before age 9 in boys, it is considered precocious puberty.

Puberty includes rapid growth of bones and muscles, changes in body shape and size, and development of the body's ability to reproduce.

The cause of precocious puberty often can't be found. Rarely, certain conditions, such as infections, hormone disorders, tumors, brain abnormalities or injuries, may cause precocious puberty. Treatment for precocious puberty typically includes medication to delay further development.

Keywords: precocious puberty, unilateral gynaecomastia, idiopathic

Aim/objective: To report a case of idiopathic precocious puberty which occurs unusually early (18months old girl) and also with only one component the larce that is confine to one breast.

Introduction

Precocious puberty is defined as the development of secondary sexual characteristics before the age of 6- 8 years in girls and 9 years in boys.

[1] Precocious puberty is more common in girls. Normal puberty is comprised of 4 pubertal changes viz:

1. Thelarche- breast development,
2. Adrenache –axillary and pubic hair,
3. Growth sprouts
4. Menarche.

The early onset of puberty can cause several problems. The early growth spurt initially can cause tall stature, but rapid bone maturation can cause linear growth to cease too early and can result in short adult stature. The early appearance of breasts or menses in girls and increased libido in boys can cause emotional distress for some children. [2]

Premature pubarche and premature thelarche are [2] common, benign, normal variant conditions that can resemble precocious puberty but are nonprogressive or very slowly progressive.

Premature thelarche refers to the isolated appearance of breast development, usually in girls younger than [3] years; premature pubarche refers to the appearance of pubic hair without other signs of puberty in girls or boys younger than 7-8 years. A thorough history, physical examination, and growth curve review can help distinguish these normal variants from true sexual precocity. [2]

If the history, physical examination, and laboratory data suggest that a child exhibits early and sustained evidence of pubertal maturation, the clinician must differentiate between the central and peripheral

causes with measure of LH: FSH (Luternizing Hormone: Follicle stimulating hormone) ratio after leuprolide injection.

The classification of precocious puberty also is either complete in which all the four changes are seen or incomplete if only one component is encountered.

We report a case of 18 months old girl with isolated unilateral breast maturation.

Case Report

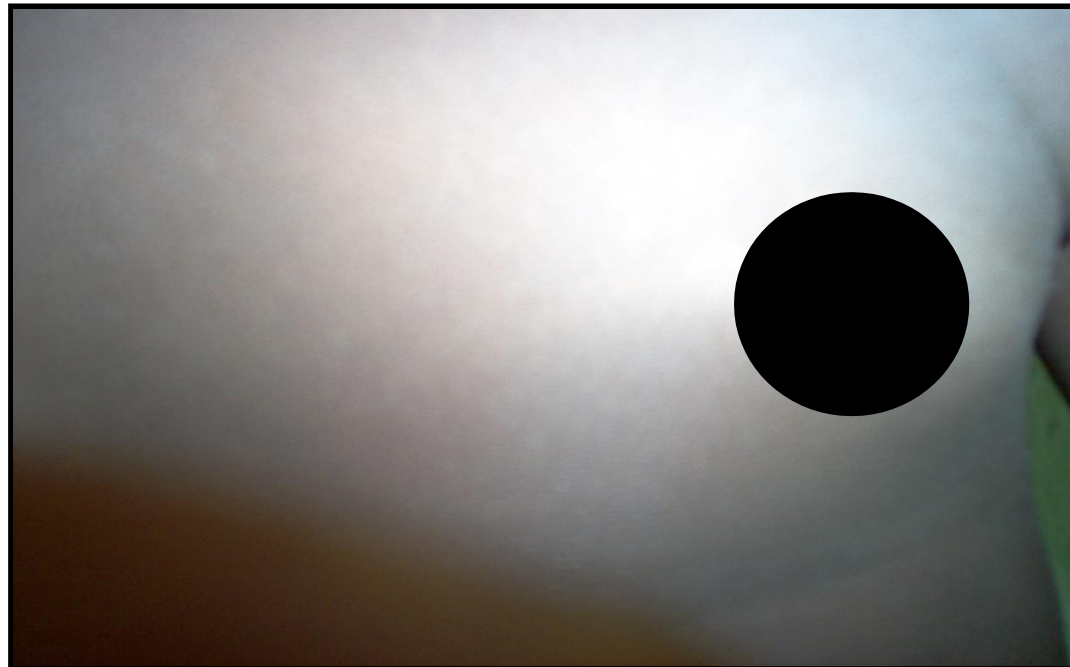
Miss A. 18 months old female child presents with 13 months history of progressive left breast enlargement notice by the mother. The mother feels the enlargement has increased about 10 times since the onset. No associated axillary and pubic hair growth and no history of bleeding per vaginam.No prior history of trauma or ingestion of any steroid containing medication. Past medical history was eventful. Pregnancy and neonatal history were unremarkable except for neonatal jaundice. Patient has completed her immunization. Diet history and developmental history were both normal. She weighs 12 kg and height of 1 meter, No family history of previous children with similar disorder. The Patient was the third child in a family of three children.

Physical examination reveals no abnormality except for left enlarged breast, Tanner stage 5 (**Figure 1**).

She was evaluated with urea/electrolyte/creatinine(U/E/C) Urea 4mmol/l, Sodium 135-140mlmols, Potasium 3.5-5mmol, chloride 95-105mmols, bicarbonate 20-25mmols and creatinine 20umol/l. Urinalysis, hormonal profile (pituitary ovary axis and pituitary

adrenal axis), ultrasonography and CT scan of head, abdomen and pelvis. All investigations were normal except for markedly elevated

estradiol (48ng/ml normal value 4ng/ml- 10 ng/ml). Follicle-stimulating hormone was <1-7, Luteinizing hormone 1.33iu.



Discussion

Precocious puberty could be divided into two types namely central and peripheral causes. Furthermore it could be viewed as either complete or incomplete. Incomplete precocious puberty is one in which only one of the components of puberty manifest is that thelarche, adrenarche or menarche. In our Patient it is only thelarche that manifest. What is interesting is that only unilateral breast enlargement occurs.

Furthermore the Patient had elevated Estradiol without the possible cause as there was no source of this hormone dictated by the investigations carried out. Since incomplete isosexual precocious puberty is usually due to transient rise in estrogen or unusual sensitivity to estrogen, it will be logical to say our patient case is case of incomplete isosexual precocious puberty with the affected breast showing increased sensitivity to pre pubertal elevated estrogen. Again precocious puberty may be gonadotropic dependent (central) or peripheral, Follicle stimulating hormone and luteinizing hormone FSH/LH was normal implying not dependent cause. The peripheral

causes due to either estrogen or testosterone secreting tumors, congenital adrenal hyperplasia or McCune-Albright syndrome were ruled out by a normal head, abdominal/pelvic CT SCANS and normal electrolytes.

The timing of puberty has been linked to genetic, family history, obesity and exogenous estrogens all of which were not evident in our patients. [3,4,5,6] Patient was managed conservatively with reassurance and later referred to a pediatric endocrinologist.

Conclusion: 80% of precocious puberty is constitutional hence after hormonal profile and abdominal ultrasound, if no cause is found Patient should be managed conservatively. But this Patient was later referred to pediatric endocrinologist for follow up.

Acknowledgement

We wish to thank Mr Innocent Ashindoitiang for helping with formatting the manuscript

References

1. Aksglaede L, Sørensen K, Petersen JH, Skakkebaek NE, Juul A (2009) Recent decline in age at breast development: the Copenhagen Puberty Study. *Pediatrics*. 123(5): e932-9.
2. Traggiai C, Stanhope R (2003) Disorders of pubertal development. *Best Practice & Research Clinical Obstetrics & Gynaecology*. 17(1): 41-56.
3. de Vries L, Kauschansky A, Shohat M, Phillip M (2004) Familial central precocious puberty suggests autosomal dominant inheritance. *J Clin Endocrinol Metab*. 89(4): 1794-800.
4. Mamun AA, Hayatbakhsh MR, O'Callaghan M, Williams G, Najman J (2009) Early overweight and pubertal maturation--pathways of association with young adults' overweight: a longitudinal study. *Int J Obes (Lond)*. 33(1): 14-20.
5. Frisch RE, McArthur JW (1974) Menstrual cycles: fatness as a determinant of minimum weight for height necessary for their maintenance or onset. *Science*. 185(4155): 949-51.
6. Lee JM, Appugliese D, Kaciroti N, Corwyn RF, Bradley RH, et al. (2007) Weight status in young girls and the onset of puberty. *Pediatrics*. 119(3): e624-30.