DOI: 10.7860/JCDR/2026/75854.22268

Case Report

Others Section

Idiopathic Non-hormonal Clitoromegaly in a Young Female: A Case Report

NAGANITYA VANGALA[1], ADARSHLATA SINGH[2], BHUSHAN MADKE[3], SREE RAMYA TALASILA[4], SOHAM MEGHE[5]

ABSTRACT

Clitoromegaly may be either congenital or acquired and is primarily caused by elevated androgen levels during foetal development, childhood, or puberty. We describe an unusual case of clitoromegaly in a young female who presented with genital pruritus, without any other significant clinical findings. Clitoromegaly is a rare condition, and in this case, the diagnosis was established following thorough physical examination, radiological imaging, and comprehensive laboratory investigations. The patient was diagnosed with acquired, idiopathic, non-hormonal clitoromegaly- an uncommon condition. This diagnosis can only be made after systematically ruling out all other potential causes.

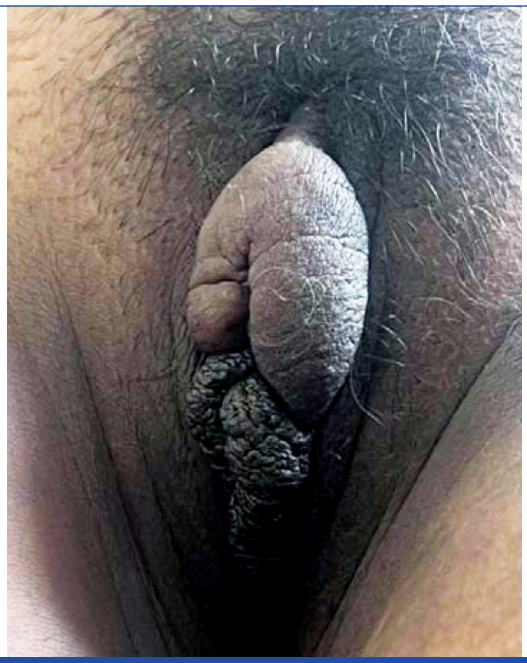
Keywords: Androgen levels, Chronic venous insufficiency, Pruritus, Puberty

CASE REPORT

A 16-year-old female was referred to the dermatology outpatient department due to complaints of genital pruritus lasting for three weeks. She initially presented with swelling of the right lower limb that had persisted for one year and was diagnosed with chronic venous insufficiency, for which she underwent Endovenous Laser Ablation Therapy (EVLT). Three months after the procedure, she developed clitoral enlargement accompanied by intense itching. There was no associated history of vaginal discharge, bleeding, or dysuria. The patient also denied any history of sexual activity, drug abuse, or similar complaints in her family.

On physical examination, she exhibited well-developed secondary sexual characteristics and had a Body Mass Index (BMI) of 21.9 kg/m^2. Breast development and pubic hair were consistent with Tanner stage 4. No signs of virilisation were noted with normal karyotype analysis.

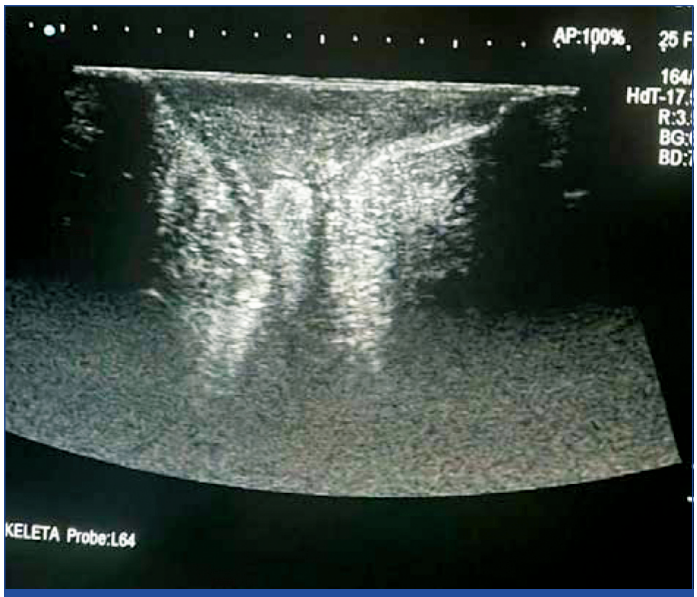
Local examination revealed clitoromegaly measuring approximately 35 mm^2, with associated hyperpigmentation of the overlying skin [Table/Fig-1]. No other local abnormalities or related symptoms were noted. The patient's medical history was unremarkable, with no evidence of congenital anomalies or known genetic disorders.



[Table/Fig-1]: Clinical image depicting clitoromegaly at the initial presentation.

Routine laboratory tests were all within normal limits. The hormonal profile results were as follows: serum testosterone: 30.4 ng/dL, DHEA-S: 194 µg/dL, Follicle Stimulating Hormone (FSH): 2.12 mIU/mL, Luteinising Hormone (LH): 2.58 mIU/mL, T3: 1.60 ng/mL, T4: 7.68 µg/dL, and Thyroid Stimulating Hormone (TSH): 2.62 mIU/mL. All values fell within the expected reference ranges for age and sex, indicating no evidence of hormonal imbalance.

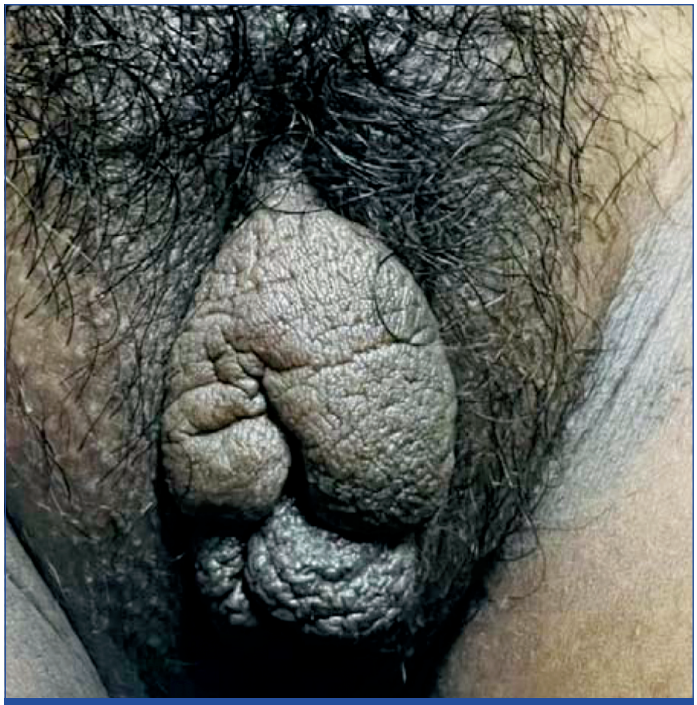
A high-resolution ultrasound of the local area [Table/Fig-2] was performed to evaluate for structural abnormalities. No significant findings, such as epidermoid cysts, neurofibromas, or peri-clitoral abscesses, were observed. She was treated on an outpatient basis with oral antihistamines, such as cetirizine 10 mg once daily at night for 10 days as part of symptomatic treatment.



[Table/Fig-2]: Ultrasonographic image of clitoromegaly showing no evidence of cystic or solid masses.

At the one-month follow-up, the clitoromegaly had slightly reduced, measuring approximately 30 mm^2 [Table/Fig-3]. A consultation with a plastic surgeon was obtained, and the recommendation was to wait and watch, with the option of clitoroplasty if cosmetic correction was ever desired.

As this patient is a young female who has just attained menarche, and considering the social taboos surrounding the genital area, she denied cosmetic correction.



[Table/Fig-3]: Clinical image displaying a reduced size of clitoromegaly at the one-month follow-up visit.

DISCUSSION

Clitoromegaly, also known as macroclitoris, refers to the abnormal enlargement of the clitoris. It may be either congenital or acquired, with the most common causes being excessive androgen exposure during fetal development, early childhood, or puberty [1].

Isolated clitoromegaly, defined as clitoral enlargement in the absence of hormonal, genetic, or neoplastic abnormalities, is an exceedingly rare clinical entity. To date, only a handful of cases have been reported in the literature, and no population-based studies are available to establish its incidence or prevalence, either globally or within India. While overt clitoromegaly in patients with ambiguous genitalia is often readily identifiable, milder or borderline cases may go unnoticed and remain undiagnosed [1].

A comprehensive history and thorough physical examination are essential when evaluating clitoral enlargement, which can result from a wide range of conditions, broadly classified into hormonal, non-hormonal, and other causes. Hormonal causes include endocrine disorders such as Congenital Adrenal Hyperplasia (CAH), androgen-secreting tumours, and exogenous androgen exposure, all of which can lead to virilisation and clitoral enlargement. Non-hormonal causes encompass structural or syndromic conditions, such as neurofibromatosis, fibroma, epidermoid cysts, and nevoid lesions like nevus lipomatosus cutaneous superficialis. Clitoromegaly may also be a feature of certain syndromes, including Turner's and Fraser syndromes. Other causes include pseudo-clitoromegaly- an apparent enlargement due to adjacent soft tissue abnormalities- and idiopathic clitoromegaly, where no identifiable underlying pathology is found [2].

Clitoromegaly is a relatively common congenital abnormality; however, acquired clitoral enlargement is rarely observed. It is defined by a clitoral index (width × length) greater than 15 mm^2 in newborns or above 21 mm^2 in adults [3].

Clitoral enlargement may arise from a range of hormonal causes, most notably endocrinopathies and androgen-secreting tumours. These include lipid cell tumours, Leydig cell tumours, arrhenoblastomas, and virilising adrenocortical carcinomas [4,5].

Non-hormonal causes include conditions such as neurofibromatosis, epidermoid cysts [6,7], fibroma [8], nevus lipomatosus cutaneous superficialis [9], and certain syndromes associated with virilisation, such as Klippel-Trenaunay syndrome [10] and Turner syndrome [11]. Pseudo-hypertrophy of the clitoris is also recognised as a contributing factor [12]. High-resolution ultrasonography serves as a valuable tool for excluding structural lesions, such as epidermoid cysts or peri-clitoral abscesses [13]. Pseudo-clitoromegaly can be found in girls as a result of constant masturbation [14].

When laboratory investigations, including haematochemical and hormonal parameters, are within normal limits and imaging reveals no abnormalities, the diagnosis of idiopathic clitoromegaly may be considered [15], as we have seen in this case.

The initial management approach for clitoromegaly involves identifying and addressing the underlying cause of the abnormal enlargement, followed by a period of observation and monitoring [16]. If clitoromegaly persists without satisfactory regression, clitoroplasty may be indicated.

The primary objectives of clitoroplasty are to preserve clitoral sensation and sexual function while achieving satisfactory cosmetic outcomes, and also to improve the psychoemotional state of the women. Although various operative techniques have been described, reports of clitoroplasty in sexually mature women that preserve both dorsal and ventral neurovascular bundles remain limited. One such method involves preservation of the neurovascular pedicles during clitoroplasty to preserve clitorial sensation and sexual function [2,17]. A meticulous clinical examination is the first and most crucial step in achieving an accurate diagnosis.

CONCLUSION(S)

Acquired idiopathic clitoromegaly is a rare condition. The main approach in managing idiopathic acquired clitoral enlargement involves identifying and treating any underlying cause, followed by careful observation. Surgical intervention is considered if there is no significant regression of clitoral hypertrophy.

Authors' contribution: Conceptualisation, Data Curation, Formal Analysis, Reviewing and editing of manuscript: NNV, AS, BM, SRT, SM.

REFERENCES

[1] Iezzi ML, Lasorella S, Varriale G, Zagaroli L, Ambrosi M, Verrotti A. Clitoromegaly in childhood and adolescence: Behind one clinical sign, a clinical sea. Sex Dev. 2018;12(4):163-74. Doi: 10.1159/000489385. Epub 2018 May 26. PMID: 29804109.

[2] Copcu E, Aktas A, Sivrioglu N, Copcu O, Oztan Y. Idiopathic isolated clitoromegaly: A report of two cases. Reprod Health. 2004;1(1):04. Doi: 10.1186/1742-4755-1-4. PMID: 15461813; PMCID: PMC523860.

[3] Bruni V, Pontello V, Dei M, Alessandrini M, Li Marzi V, Nicita G. Hemangioma of the clitoris presenting as clitoromegaly: A case report. J Pediatr Adolesc Gynecol. 2009;22(5):e137-e138. Doi: 10.1016/j.jpag.2008.11.002. Epub 2009 Jul 3. PMID: 19576811.

[4] Dhande A, Chougle QA, Lal V, Gupta S, Dhande K. Neurofibroma presenting as clitoromegaly. Int J Res Med Sci. 2015;3(12):3887-88.

[5] Bongiovanni AM, Di George A, Grtjmbach M. Masculinization of the female infant associated with estrogenic therapy alone during gestation: Four cases. J Clin Endocrin Metab. 2016;19:1004-11.

[6] Asante A, Omurtag K, Roberts C. Epidermal inclusion cyst of the clitoris 30 years after female genital mutilation. Fertil Steril. 2010;94(3):1097.e1-3. Doi: 10.1016/j.fertnstert.2010.02.007. Epub 2010 Mar 16. PMID: 20236635.

[7] Rouzi AA. Epidermal clitoral inclusion cysts: Not a rare complication of female genital mutilation. Hum Reprod. 2010;25(7):1672-74.

[8] Gomes AL, Onofre LS, Leão JQ de Souza, Leão FG, Cruz TMA, Sircilli MHP, et al. Clitoral anomalies not associated with disorders of sex development. J Ped Surg Case Rep. 2013;1(11):403-05.

[9] Hattori R, Kubo T, Yano K, Tanemura A, Yamaguchi Y, Itami S, et al. Nevus lipomatosus cutaneous superficialis of the clitoris. Dermatol Surg. 2003;29(10):1071-72. Doi: 10.1046/j.1524-4725.2003.29306.x. PMID: 12974709.

[10] Baskerville PA, Ackroyd JS, Browse NL. The etiology of the Klippel-Trenaunay syndrome. Ann Surg. 1985;202:624-27.

[11] Bergendi E, Plöchl E, Vlasak I, Rittinger O, Muss W. A Turner-like phenotype in a girl with an isodicentric fluorescent Y chromosome mosaicism. Klin Padiatr. 1997;209:133-36.

[12] Wilkie AO, Slaney SF, Oldridge M, Poole MD, Ashworth GJ, et al. Apert syndrome results from localized mutations of FGFR2 and is allelic with Crouzon syndrome. Nat Genet. 1995;9:165-72.

[13] Koussidis GA. Gynecologic rarities: A case of periclitoral abscess and review of the literature. Am J Obstet Gynecol. 2012;207(5):e3-e5. Doi: 10.1016/j.ajog.2012.08.029. Epub 2012 Aug 21. PMID: 22975589.

[14] Padmaja A, Chitranshi A. Idiopathic acquired clitoromegaly: A case report. RCOG World Congress 2014; poster ID 1211.
[15] Gupta M, Saini V, Poddar A, Kumari S, Maitra A. Acquired clitoromegaly: A gynaecological problem or an obstetric complication? J Clin Diagn Res. 2016;10(12):QD10-QD11. Doi: 10.7860/JCDR/2016/23212.9072. Epub 2016 Dec 1. PMID: 28208951; PMCID: PMC5296524.
[16] Horejsí J. Acquired clitoral enlargement. Diagnosis and treatment. Ann N Y Acad Sci. 1997;816:369-72. Doi: 10.1111/j.1749-6632.1997.tb52163.x. PMID: 9238289.
[17] Stoyanov S, Ivanova K, Koleva I. Idiopathic clitoromegaly is a relatively rare diseet al. Operative treatment of idiopathic isolated clitoromegaly - A clinical case. Acta Medica Bulgarica. 2024;51(1):58-61. https://doi.org/10.2478/amb-2024-0009.

PARTICULARS OF CONTRIBUTORS:
1. Postgraduate Student, Department of Dermatology, Venerology and Leprosy, Jawaharlal Nehru Medical College, Wardha, Maharashtra, India.
2. Postgraduate Student, Department of Dermatology, Venerology and Leprosy, Jawaharlal Nehru Medical College, Wardha, Maharashtra, India.
3. Postgraduate Student, Department of Dermatology, Venerology and Leprosy, Jawaharlal Nehru Medical College, Wardha, Maharashtra, India.
4. Postgraduate Student, Department of Dermatology, Venerology and Leprosy, Jawaharlal Nehru Medical College, Wardha, Maharashtra, India.
5. Postgraduate Student, Department of Dermatology, Venerology and Leprosy, Jawaharlal Nehru Medical College, Wardha, Maharashtra, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Naganitya Vangala,
Postgraduate Student, Department of Dermatology, Venerology and Leprosy,
Jawaharlal Nehru Medical College, Wardha-442004, Maharashtra, India.
E-mail: naganityavangala99@gmail.com

PLAGIARISM CHECKING METHODS: [Jain H et al.]
- Plagiarism X-checker: Oct 17, 2024
- Manual Googling: Aug 18, 2025
- iThenticate Software: Aug 20, 2025 (5%)

ETYMOLOGY: Author Origin

EMENDATIONS: 6

AUTHOR DECLARATION:
- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. Yes

Date of Submission: **Oct 15, 2024**
Date of Peer Review: **Dec 25, 2024**
Date of Acceptance: **Aug 22, 2025**
Date of Publishing: **Jan 01, 2026**