CASE REPORT e-ISSN: 2349-0659 p-ISSN; 2350-0964

Incidental Stromal Luteoma in a Post-menopausal Female: A Case Report

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Abstract

Stromal luteomas are rare ovarian tumors occurring mostly in post-menopausal women. They are often associated with endocrine symptoms and signs of virilization. Post-menopausal bleeding related to hyperestrinism is observed frequently with fewer androgenic manifestations. We present a case report of a 68-year-old female who presented with post-menopausal bleeding. The presence of stromal luteoma of the ovary was diagnosed on histopathology.

Keywords: Luteoma, Ovarian stroma, Post-menopausal bleeding

Asian Pac. J. Health Sci., (2026); DOI: 10.21276/apjhs.2026.13.3.03

Introduction

Stromal luteoma is an uncommon benign tumor that occurs exclusively in post-menopausal women. They are associated with abnormal uterine bleeding.[1]

These tumors are almost always <3 cm in diameter, unilateral, solid, and well circumscribed. Microscopic examination reveals cells arranged in nests and cords with surrounding normal ovarian stroma.[2] Symptoms may differ depending on the hormones secreted from the tumor cells, resulting in either hyperestrogenic or virilizing (hyperandrogenism).[3]

Histopathological examination remains the cornerstone of diagnosis, whereas immunohistochemistry helps distinguish stromal luteoma from other steroid-producing ovarian tumors.[4,5]

Herein, we report a case of ovarian cortical stromal luteoma in a post-menopausal woman – an incidental finding, with its clinical and pathological features.

Case Presentation

A 68-year-old female presented with post-menopausal bleeding for 3 months associated with abdominal pain. Transvaginal sonography showed thickened and bulky endometrium with cystic changes (possibly neoplastic) with a right ovarian simple cyst. The patient underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy.

Gross Findings

Gross examination revealed an atrophic uterus with hypertrophied cervix. Left ovary showed a well-defined solid nodule, tan in color, measuring 2 × 2 cm in size with a homogeneous appearance.

Microscopic Findings

A well-defined tumor noted within the left ovary comprised of cells arranged in nests, sheets, and cords (Figure 1). Individual cells have round nuclei and deeply eosinophilic cytoplasm (Figure 2). Surrounding blood vessels appear prominent. Adjacent normal ovarian stroma seen (Figure 3).

Endometrium shows focal crowding and back-to-back glandular arrangement showing features of non-atypical hyperplasia (Figure 4).

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How to cite this article: Bhatia V, Halder NR, Halder B. Incidental Stromal Luteoma in a Post-menopausal Female: A Case Report. Asian Pac. J. Health Sci., 2026;13(3):8-10.

Source of support: Nil.

Conflicts of interest: None.

Received: 18/06/2026 **Revised:** 03/07/2026 **Accepted:** 04/08/2026

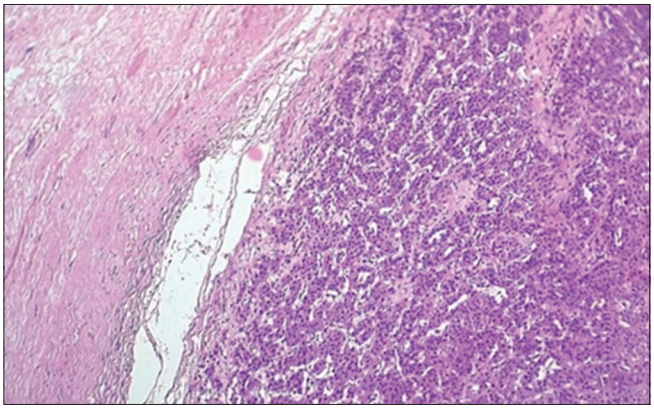

Figure 1: 100× image shows cords of monotonous cells having round to oval nuclei and moderate eosinophilic cytoplasm with surrounding capillaries

DISCUSSION

Ovarian stromal luteoma is a rare benign steroid-producing ovarian tumor that predominantly occurs in postmenopausal women. The clinical presentation is variable and depends on the hormonal activity of the tumor. Patients may present with postmenopausal bleeding, hyperandrogenic manifestations or virilization, while some lesions may remain clinically silent and be detected incidentally.[6-11]

Postmenopausal hyperandrogenism and virilization are uncommon manifestations of ovarian steroid-producing tumors. Stromal luteoma may occasionally produce androgens, resulting

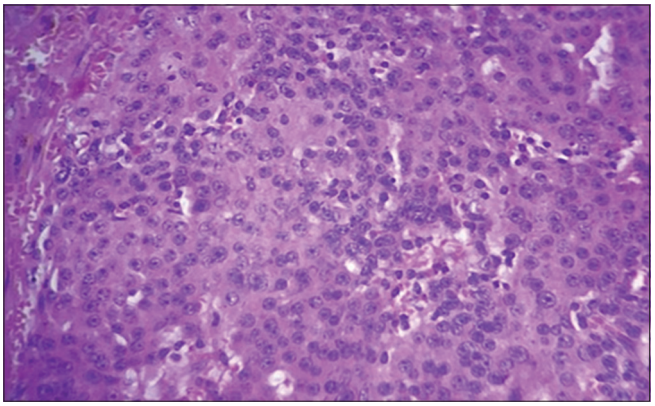

Figure 2: 400× image shows luteinized stromal cells

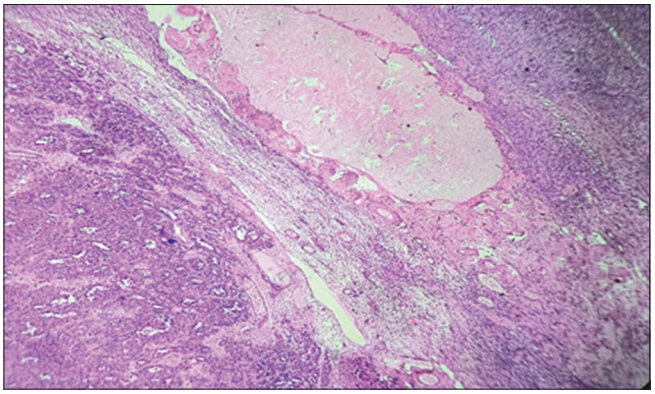

Figure 3: 100× image shows stromal luteoma with normal ovarian tissue

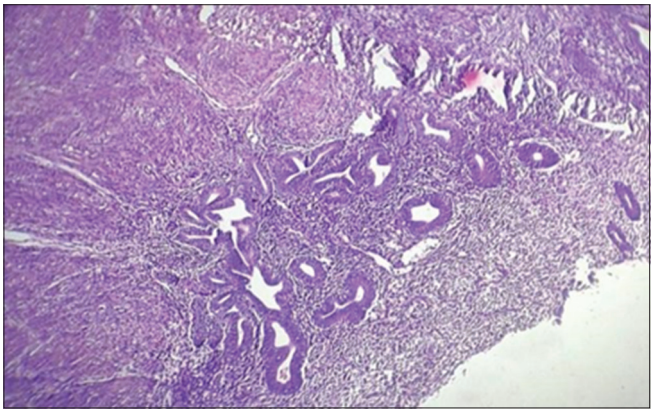

Figure 4: 100× image shows back-to-back arrangement of glands in endometrium

in clinical features such as hirsutism, deepening of the voice and other signs of virilization. However, not all stromal luteomas are associated with androgenic manifestations, and some patients may present with nonspecific gynecological symptoms.[6,7,9] In the present case, the patient presented with postmenopausal bleeding without any clinical evidence of virilization, highlighting the variable hormonal presentation of this tumor.

Postmenopausal virilization and other steroid-related manifestations may also occur in other ovarian steroid-producing tumors.[8] Therefore, careful clinicopathological correlation and recognition of the characteristic histomorphology are essential to distinguish stromal luteoma from other steroid-producing ovarian neoplasms.

The present case showed a well-circumscribed, solid ovarian nodule measuring 2 × 2 cm. Histologically, the tumor was composed of nests, sheets and cords of monotonous luteinized cells having round nuclei and abundant eosinophilic cytoplasm, with prominent surrounding capillaries and preservation of adjacent ovarian stroma. These morphological findings are characteristic of stromal luteoma and are consistent with the histopathological features described in previously reported cases.[10,11]

Stromal luteoma may also occur in association with other gynecological pathologies. Rare cases have been described in association with uterine leiomyomatosis as well as endometrial malignancy.[10,12] In the present case, the endometrium showed focal glandular crowding and back-to-back glands consistent with non-atypical endometrial hyperplasia. The coexistence of endometrial hyperplasia in a postmenopausal woman with stromal luteoma may suggest a possible hormonal influence; however, a definite causal relationship cannot be established.

The variable clinical presentation and rarity of ovarian stromal luteoma may make its diagnosis challenging. It is important to distinguish it from other ovarian steroid-producing tumors, particularly when hormonal manifestations are present. Careful evaluation of the characteristic morphology and clinicopathological correlation are important for establishing the diagnosis.[10,11]

In the present case, the tumor was identified incidentally in a postmenopausal woman presenting with postmenopausal bleeding and was associated with non-atypical endometrial hyperplasia. The small size, well-circumscribed nature and characteristic luteinized morphology supported the diagnosis of ovarian cortical stromal luteoma. Awareness of this uncommon entity is important for accurate diagnosis and appropriate clinicopathological correlation.

Conclusion

Ovarian cortical stromal luteoma is a rare benign steroid cell tumor that predominantly affects post-menopausal women and may present with abnormal uterine bleeding, virilization, or may be discovered incidentally. Because its clinical and radiological features are often nonspecific, definitive diagnosis relies on careful histopathological examination, supported by immunohistochemistry when required. Recognition of this uncommon entity is important to distinguish it from other steroid-producing ovarian neoplasms and to ensure appropriate management. Surgical excision is curative in most cases, with an excellent prognosis. Reporting additional cases will enhance understanding of its clinico-pathological spectrum and aid in improving diagnostic accuracy.

Acknowledgment

No additional contributions were made by anyone apart from the authors of this manuscript.

References

1. Wick MR, LiVolsi VA, Pfeifer JD, Stelow EB, Wakely PE Jr., editors. Silverberg's Principles and Practice of Surgical Pathology and

Cytopathology. 5th ed. Cambridge: Cambridge University Press; 2015.
2. Kurman RJ, Hedrick Ellenson L, Ronnett BM, editors. Blaustein's Pathology of the Female Genital Tract. 7th ed. Cham, Switzerland: Springer; 2019.
3. Akhtar K, Saeed N, Alam S, Jabin S. Stromal luteoma of the ovary: A rare case presentation. J Pathol Infect Dis 2020;3:1-3.
4. Hayes MC, Scully RE. Stromal luteoma of the ovary: A clinicopathological analysis of 25 cases. Int J Gynecol Pathol 1987;6:313-21.
5. Vilain MO, Cabaret V, Delobelle-Deroide A, Duminy F, Laurent JC. Stromal luteoma of the ovary. Differential diagnosis of steroid cell tumors. Ann Pathol 1992;12:193-7.
6. Ajith S, Beena G, Mathew NM, Omana EK. Postmenopausal hyperandrogenism of ovarian origin: A clinicopathologic study of five cases. J Midlife Health 2016;7:189-92.
7. Uyking-Naranjo M, Mirasol R. Ovarian stromal tumors: A rare cause of postmenopausal virilization. J ASEAN Fed Endocr Soc 2013;28:78.
8. Ebrahimpur M, Mohajeri-Tehrani MR, Saffar H, Pejman Sani M. A rare case report of postmenopausal virilization: Ovarian steroid cell tumor. Acta Med Iran 2019;57:728-30.
9. Bogdanou D, Meyer G, Stücker AU, Hansmann ML, Thalhammer A, Bojunga J. A rare case of an androgen-producing stromal luteoma of the ovary in a postmenopausal woman, diagnosed by means of selective venous blood sampling. Endocr Abstr 2014;35:P523.
10. Balaji S, Stephen N, Govindaraj T, Hiremath PB. Stromal luteoma in a case of multiple leiomyomatosis - a rare case report. IP J Diagn Pathol Oncol 2022;7:43-5.
11. Kulkarni MP, Agashe SR, Momin YA, Joshi RT, Sulhyan KR. Stromal luteoma: Report of a rare case. Indian J Pathol Microbiol 2007;50:351-3.
12. Dhingra KK, Sharma P, Khurana N, Chaturvedi KU. Ovarian stromal luteoma in a patient with endometrial carcinoma. J Obstet Gynaecol Res 2008;34:283-5.