

Prostatic Glandular Differentiation in Cystic Teratoma Of the Ovary in An Elderly Woman

Cecilia Salzillo^{1*}, Marialessandra Capuzzolo¹, Mario Magistro¹, Andrea Quaranta², Giovanni De Biasi¹, Sonia Maniglio¹, Carla Nardelli¹, Grazia Nucci¹, Alessandra Sanasi³, Marco Marinaccio³, Gabriella Serio¹ and Andrea Marzullo¹

¹Department of Precision and Regenerative Medicine and Ionian Area-DiMePREJ, Section of Pathology, University of Bari "Aldo Moro", Piazza Giulio Cesare 11, 70121, Bari, Italy

²School of Medicine, University of Bari, Piazza Giulio Cesare 11, 70121, Bari, Italy

³Department of Biomedical Sciences and Human Oncology, Obstetrics and Gynaecology Unit, University of Bari "Aldo Moro", 70124 Bari, Italy

*Corresponding Author

Cecilia Salzillo, Department of Precision and Regenerative Medicine and Ionian Area-DiMePREJ, Section of Pathology, University of Bari "Aldo Moro", Piazza Giulio Cesare 11, 70121, Bari, Italy.

Submitted: 2023, Aug 24; Accepted: 2023, Sep 27; Published: 2023, Sep 28

Citation: Salzillo, C., Capuzzolo, M., Magistro, M., Quaranta, A., G. De Biasi., et al. (2023). Prostatic Glandular Differentiation in Cystic Teratoma Of the Ovary in An Elderly Woman. *Int J Diabetes Metab Disord*, 8(3), 440-441.

The first documented case of teratoma dates to 1820 and was described by the French physician Geoffroy Saint-Hilaire [1]. The term "teratoma" derives from the Greek *τέρας* "teras", meaning "monster" or "anomaly", and *-ωμα* "oma", meaning "tumor" [2]. This name was coined in 1863 by German pathologist Rudolf Virchow, who studied numerous cases of tumors containing heterogeneous tissues and noted that these tumors appeared to contain "a monster" of various tissue types.

Teratomas are germ cell tumors which arise from totipotent cells or primitive germ cells and consist of tissues originating from two or more of the three germ layers (ectoderm, mesoderm, and endoderm) [2]. Teratomas are usually located along the midline or in paramedian position, can either be gonadal (20%) or extragonadal (80%) and are mostly benign [2]. Mature cystic teratomas (also known as dermoid cysts) are one of the most frequent benign ovarian neoplasms, accounting for 10–20% of all ovarian tumors [3]. In most cases they contain well-differentiated tissues from all three germ layers. Ovarian teratomas can occur at any age, although they are more frequent in the reproductive age with an average age of presentation of 35 years [5].

Postmenopausal manifestations represent only 20.5% of cases and often affect the right ovary [3]. Ovarian teratomas can be asymptomatic or cause symptoms that often include abdominal pain, bloating, and menstrual cycle changes. Risk factors are not completely known but may include a family history of ovarian cancers. Furthermore, mature ovarian teratomas are usually

diploid and cytogenetic studies demonstrated that they almost always have a 46, XX karyotype; hence, the presence of prostatic tissue is very rare [4,5]. The etiopathogenesis behind these findings is controversial and to this day, only few cases have been described in the literature [3,5].

Some authors have proposed a metaplastic hypothesis based on the local production of androgens from the luteinized stroma of the ovary, that was defined as a "hormonal microenvironment", as a pathogenetic mechanism [6]. Another hypothesis reported in the literature is the development from genetic material derived from paternal chromosomes which was unsuccessfully inactivated during parthenogenesis [3]. We would like to report the case of a 76-year-old woman who arrives at the Policlinic Hospital of Bari-Southern Italy, with imaging performed in another center that pointed out a formation in the right ovary. MRI of the lower abdomen and pelvis "in correspondence with the right adnexa" showed "a formation measuring 32x28x40 mm, with non-homogenous signal intensity due to the presence of cystic areas associated with a solid, poorly vascularized component". Ultrasound examination revealed "on the right side, a solid formation of 33x19 mm, negative for color score". The patient, who had negative tumor markers, underwent a right unilateral adnexectomy and the surgical resection specimen was sent to the pathology unit for histological examination.

Under macroscopic examination, the right ovary appears transformed into a cystic formation with a maximum diameter of 3 cm, containing sebaceous material. The 7 cm-long fallopian

tube showed no visible alteration. Histologically it is characterized by the presence of skin, skin appendages (sebaceous glands and hair follicles), striated and smooth muscle, nervous and vascular structures, and prostate-like glands (fig. 1 -A). On immunohistochemistry the prostate glands stained strongly

positively for PSA (fig. 1 – B) and CK34betaE12. These aspects led to a final diagnosis of "Mature Cystic Triphyllic Teratoma (dermoid cyst) of the ovary with prostate glands" in an elderly woman.

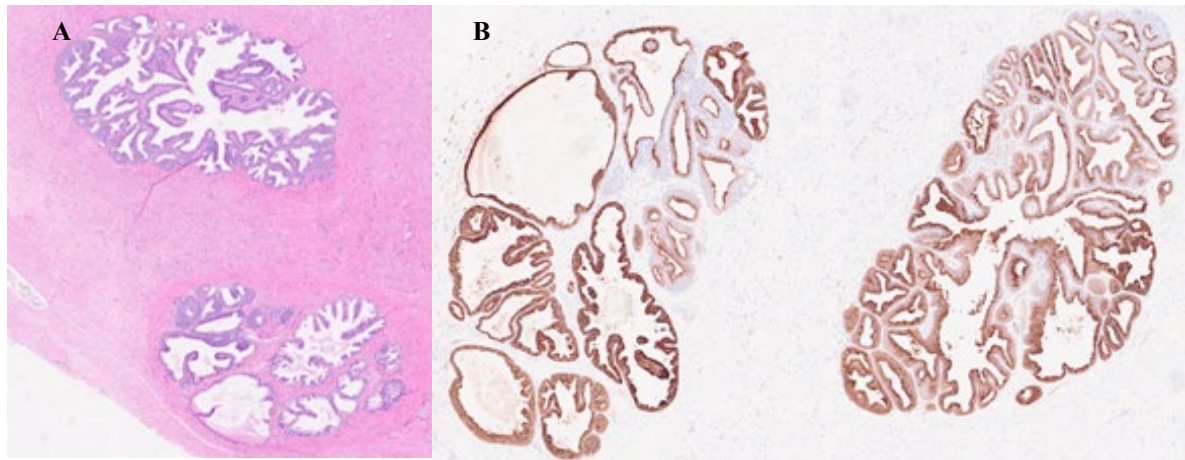


Figure 1: Mature cystic triphyllic teratoma. A) Prostate glands (HE - 1,25x). B) Immunohistochemistry of PSA-positive prostate glands (2,5x).

References

1. Cooper, M. (2004). Regenerative medicine: stem cells and the science of monstrosity. *Medical humanities*, 30(1), 12-22.
2. Salzillo, C., Quaranta, A., De Biasi, G., Cazzato, G., Serio, G., Vimercati, A., ... & Marzullo, A. (2023). Mature Triphyllic Cystic Teratoma of the Posterior Mediastinum in a Fetus: A Case Report and Literature Review.
3. Pecorella, I., Framarino dei Malatesta, M. L., Riganelli, L., Ciardi, G., & Porpora, M. G. (2022). Prostatic tissue: an unexpected finding in a mature ovarian teratoma: Case report and systematic literature review. *Archives of Gynecology and Obstetrics*, 1-8.
4. Shelekhova, K. V., Hejda, V., Kazakov, D. V., & Michal, M. (2008). Mature cystic teratoma of the ovary with male accessory sexual glands including seminal vesicles, prostatic tissue, and bulbo-urethral glands: a case report. *Virchows Archiv*, 452, 109-111.
5. Resta, L., Marzullo, A., Pellegrino, M., Rizzi, E., & Piscitelli, D. (2004). Male urogenital sinus structures in mature cystic teratomas of the ovary. Report of two cases. *Histopathology*, 45(3), 303-305.
6. Uzoaru, I., Akang, E. E. U., Aghadiuno, P. U., & Nadimpalli, V. R. (1992). Benign cystic ovarian teratomas with prostatic tissue: a report of two cases. *Teratology*, 45(3), 235-239.

Copyright: © 2023 Cecilia Salzillo, et al. 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.