

Immature Teratoma of Testis with Capsular Invasion with High Grade Intratubular Germ Cell Neoplasia in Situ – A Case Report Diagnosed on Histology

Dr. Chandrika Algotar¹, Dr. Kinjal Senta^{2*}

¹Associate Professor, Pathology Department C. U. Shah Medical College and Hospital, Surendranagar, Gujarat, India

²Resident Doctor, Pathology Department C. U. Shah Medical College and Hospital Surendranagar, Gujarat, India

DOI: [10.36347/sjmcr.2021.v09i12.022](https://doi.org/10.36347/sjmcr.2021.v09i12.022)

| Received: 15.11.2021 | Accepted: 18.12.2021 | Published: 27.12.2021

*Corresponding author: Dr. Kinjal Senta

Abstract

Case Report

Teratoma is germ cell tumor which contains tissue elements of all three germ cell layers. Testicular teratoma is subtype of non-seminomatous germ cell tumors. It is divided into two types according to age – Prepubertal and Postpubertal teratoma. Histologically it is divided into mature and immature teratoma. Intratubular germ cell neoplasia in situ (ITGCN) is common feature associated with teratoma. We are presenting case report of 40 yrs old male presenting with painless scrotal mass. On examination left testis was enlarged with firm to hard scrotal mass. Right testis was normal. Patient underwent orchidectomy and biopsy taken which diagnosed as postpubertal immature teratoma with ITGCN on histology.

Key words: Immature teratoma, Postpubertal teratoma, ITGCN.

Copyright © 2021 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Teratoma is germ cell tumor which contains tissue elements of all three germ cell layers. Testicular teratoma is subtype of non-seminomatous germ cell tumors. It is divided into two types according to age – Prepubertal and Postpubertal teratoma. Histologically it is divided into mature and immature teratoma [1]. Postpubertal teratomas are often mixed and malignant [2]. Intratubular germ cell neoplasia in situ (ITGCN) is common feature associated with teratoma. Teratomas comprises only 5% of all germ cell tumors. Immature teratoma contains immature embryonal tissue most commonly primitive neuroepithelium in addition to cartilage, sebaceous glands and other elements of three germ cell layers [3].

CASE REPORT

A 40 yrs old male patient presented with a painless scrotal swelling since 3 months. On examination left testicular enlargement was seen with a firm to hard diffuse scrotal mass. Right testis was normal. Patient had no urinary complaints. Patient had undergone orchidectomy.

A 8x4.5x4cm sized testicular specimen attached with cord is received. Outer surface is smooth,

shiny and capsulated. On cut section it shows greyish white and few greyish brown areas. It is greyish white homogenous and shows very tiny slit like spaces.



Fig-1: Shows orchidectomy specimen

Microscopic Examination: H&E stained section shows variable amount of different tissue elements comprising of islands of cartilage, sebaceous glands. Multiple cystic spaces lined by tall columnar epithelium with immature neuroepithelium forming primitive tubules, rossets and spindle stroma. Stroma is fibrous and shows myxomatous degeneration around neuroepithelium. Periphery of tumor shows testicular tubules in which some of show intratubular germ cell neoplasia in situ with extratubular invasion at place.

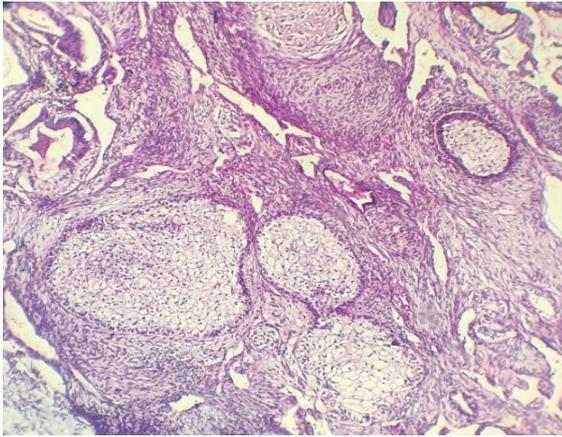


Fig-2: (10x H&E) immature cartilage and sebaceous glands

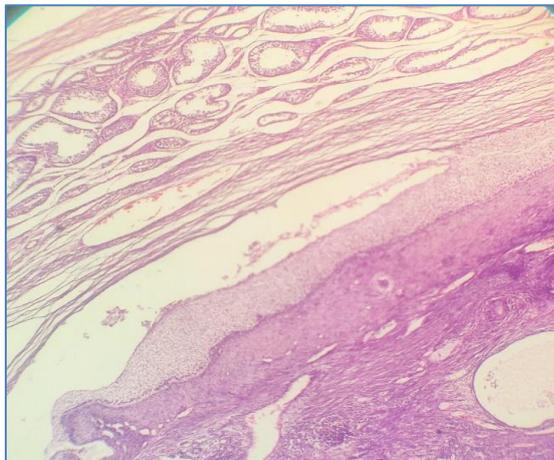


Fig-3: (10x H&E) intratubular germ cell neoplasia in situ component seen in capsule

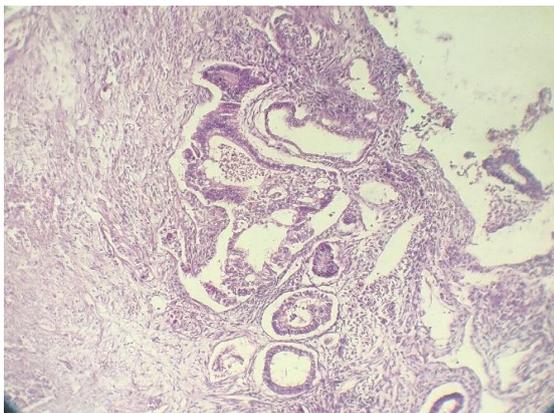


Fig-4: (40x H&E) immature neural elements forming primitive tubules, blastemal elements

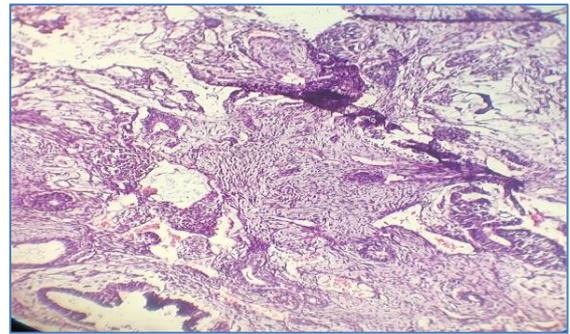


Fig-5(40x H&E): Immature neural elements and spindled stroma

DISCUSSION

Postpubertal teratoma is rare among the cases of teratoma in testis. The intratubular germ cell neoplasia in situ component may be the initial precursor lesion for this type of lesion. This case also has shown syringomatous cells invade into capsule. Such type of lesions requires close follow up for metastasis and also evaluation of intratubular germ cell neoplasia in contralateral testis.

CONCLUSION

Immature Teratomas are rare, malignant, rapidly growing neoplasm usually solid and unilateral in presentation. ITGCN is common feature associated with postpubertal teratoma. Teratoma is frequently chemoresistant and clinical management of these tumors includes radical inguinal orchidectomy followed by retroperitoneal lymphnode dissection if indicated.

REFERENCES

1. Wetherell, D., Weerakoon, M., Williams, D., Beharry, B. K., Sliwinski, A., Ow, D., & Lawrentschuk, N. (2014). Mature and immature teratoma: a review of pathological characteristics and treatment options. *Med Surg Urol*, 3(124), 2.
2. Ibrahim, D. Y., & Sun, H. (2019). Somatic malignant transformation of a testicular teratoma: a case report and an unusual presentation. *Case reports in pathology*, 2019.
3. Marina, N. M., Cushing, B., Giller, R., Cohen, L., Lauer, S. J., Ablin, A., & Castleberry, R. P. (1999). Complete surgical excision is effective treatment for children with immature teratomas with or without malignant elements: A Pediatric Oncology Group/Children's Cancer Group Intergroup Study. *Journal of clinical oncology*, 17(7), 2137-2143.
4. Sesterhenn, Isabell, A., & Charles, J. Davis, Jr. (2004). "Pathology of germ cell tumors of the testis." *Cancer Control*, 11(6); 374-387.
5. Ulbright, T.M. (2005). Germ cell tumors of the gonads: a selective review emphasizing problems in differential diagnosis, newly appreciated, and controversial issues. *Mod Pathol* 18 suppl 2: S61-79