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Editorial

Slimy and Soggy-Mucinous Cystadenocarcinoma Testis

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Mucinous cystadenocarcinoma testis is a neoplasm articulated of ovarian subtype of surface epithelium. The testicular carcinoma principally expounds mucinous differentiation.

Mucinous cystadenocarcinoma configures as an extremely exceptional, testicular neoplasm. Tumour commonly emerges within middle aged and elderly, male subjects. Mean age of disease emergence is 62 years [1,2].

Of obscure genesis, the ovarian subtype of surface epithelial tumour may arise within testis and paratestis. Tumefaction is posited to be derived from Müllerian epithelial remnants or may arise due to metaplasia of mesothelium layering tunica vaginalis [2,3].

Clinically, individuals may represent with painless enlargement of the scrotum. Alternatively, minimal tenderness of scrotum may emerge [3,4].

Grossly, neoplasm emerges as a mucinous, cystic mass adjoining and replacing testicular parenchyma [3,4].

Upon microscopy, the malignant neoplasm represents as a well to moderately differentiated, cystic neoplasm displaying mucinous differentiation. Tumefaction is comprised of congregation of cohesive, irregular, back to back glands commingled with complex articulations of fine, elongated papillary structures. The neoplastic glandular component is layered with ciliated cuboidal to columnar epithelial cells alternating with mucin rich goblet cells. Intervening stroma is minimal [4,5].

Papillary structures delineate atypical cells impregnated with overlapping, hyperchromatic, elongated nuclei with coarse nuclear chromatin and enhanced nucleocytoplasmic ratio. Cystic spaces are pervaded with mucin, fibrino-purulent substance and degenerative cellular debris [4,5].

Psammoma bodies and focal calcification may be discerned. Focal mucin extravasation may ensue [5,6].

Prognostic stages of carcinoma testis [4,5]:

- Stage 0: Tis, N0, M0, S0.
- Stage I: T1 - 4, N0, M0, SX.
    - Stage IA: T1, N0, M0, S0.
    - Stage IB: T2 - 4, N0, M0, S0.
    - Stage IS: T1 - 4, TX, N0, M0, S1 - 3.

Germ cell tumours derived from germ cell neoplasia *in situ*
Non invasive lesions as germ cell neoplasia *in situ*/gonadoblastoma
Germinoma
Seminoma, pure
Seminoma with syncitiotrophoblastic cells
Non seminomatous germ cell tumour, pure
Embryonal carcinoma
Yolk sac tumour, postpubertal type
Trophoblastic tumours, choriocarcinoma
Teratoma, postpubertal or teratoma with somatic type transformation
Non seminomatous mixed germ cell tumours
Regressed germ cell tumour
Germ cell tumours unrelated to germ cell neoplasia *in situ*
Spermatocytic tumour
Prepubertal (paediatric) tumours
Teratoma, prepubertal type
Dermoid cyst
Epidermoid cyst
Yolk sac tumour, prepubertal type
Prepubertal type testicular neuroendocrine tumour
Mixed prepubertal type tumours

Table 1: *World health organization of testicular germ cell tumours [4,5].*

Sex cord/Stromal tumours
Leydig cell tumour
Malignant Leydig cell tumour
Sertoli cell tumour
Malignant Sertoli cell tumour
Large cell calcifying Sertoli cell tumour
Intra-tubular large cell hyalinising Sertoli cell neoplasia
Granulosa cell tumour
Adult type
Juvenile type
Thecoma/fibroma group of tumours
Other sex cord gonadal/stromal tumours
Mixed
Unclassified

Tumours containing germ cell and sex cord/gonadal stromal component
Gonadoblastoma
Miscellaneous non specific stromal cell tumours
Ovarian epithelial tumours
Tumours of collecting ducts and rete testis
Adenoma
Carcinoma
Tumours of paratesticular structures
Adenomatoid tumour
Mesothelioma(epithelioid/biphasic)
Epididymal tumours
Cystadenoma of epididymis
Papillary cystadenoma
Adenocarcinoma of the epididymis
Mesenchymal tumours of spermatic cord and testicular adnexa

Table 2: *World health organization of testicular tumours [4,5].*

- Stage II: T1 - 4, TX, N1 - 3, M0, SX.
    - Stage IIA: T1 - 4, TX, N1, M0, S0 - 1.
    - Stage IIB: T1 - 4, TX, N2, M0, S0 - 1.
    - Stage IIC: T1 - 4, TX, N3, M0, S0 - 1.
- Stage III: T1 - 4, TX, N0 - 3, M1, SX.
    - Stage IIIA: T1 - 4, TX, N0 - 3, M1a, S0 - 1.
    - Stage IIIB: T1 - 4, TX, N1 - 3, M0, S2 OR T1 - 4, TX, N0 - 3, M1a, S2.
    - Stage IIIC: T1 - 4, TX, N1 - 3, M0, S3 OR T1 - 4, TX, N0 - 3, M1a, S3 OR T1 - 4, TX, N0 - 3, M1b, S0 – 3.

Mucinous cystadenocarcinoma testis appears immune reactive to CK20, carcinoembryonic antigen (CEA) or mucin 2. Focal immune reactivity to oestrogen receptor (ER) and p53 is encountered [6,7].

Tumour cells appear immune non reactive to CK7, vimentin, thyroid transcription factor 1 (TTF1), progesterone receptor (PR), Wilm's tumour 1 (WT1) antigen, CA125 and mucin 5AC [7,8].

Mucinous cystadenocarcinoma testis requires segregation from neoplasms as adenocarcinoma of rete testis or epididymis, distant metastasis from neoplasms as mucinous adenocarcinoma emerging from appendix, colon, pancreas, gastric region, pancreas, pulmonary parenchyma or prostate and teratoma with malignant transformation [7,8].

Cogent and extensive clinical evaluation appears mandatory in order to exclude distant metastasis from neoplasms as primary adenocarcinoma of appendix, colon, gastric region, pancreas, pulmonary parenchyma or prostate [7,8].

Mucinous cystadenocarcinoma testis may be appropriately alleviated by surgical manoeuvers as radical orchiectomy [8,9].

Tumour necessitates meticulous monitoring with evaluation of serum tumour markers, ultrasonography of scrotum, computerized tomography of abdomen and pelvis and procedures as colonoscopy or gastroscopy, which may be adopted in order to ascertain occurrence of distant metastases or various primary adenocarcinomas [8,9].

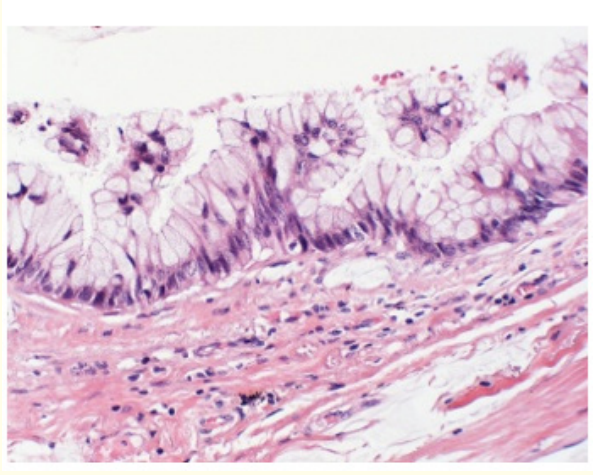

Figure 1: *Mucinous cystadenocarcinoma depicting amalgamated, back to back glandular articulations lined by ciliated columnar epithelium with intermingled mucin rich goblet cells. Nuclear atypia is significant. Surrounding stroma is fibrotic and minimal [10].*

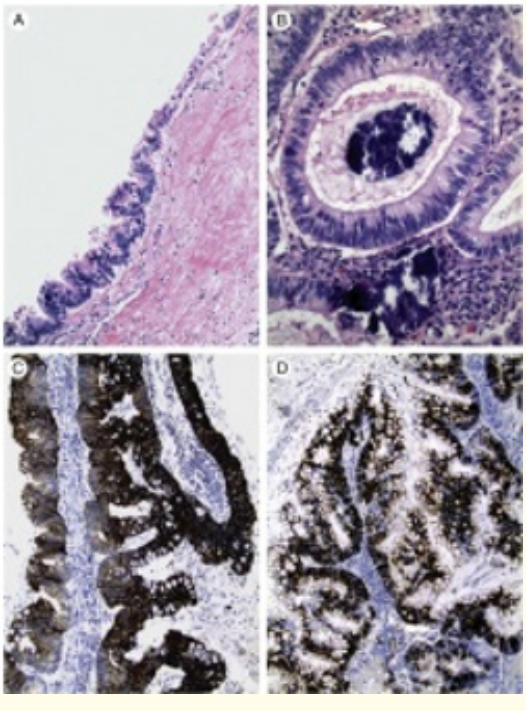

Figure 2: *Mucinous cystadenocarcinoma testis exemplifying aggregates of glandular structures lined with multi-layered and pseudostratified columnar epithelium intermingled with mucin rich goblet cells. Nuclear atypia is prominent. Surrounding stroma is minimal and fibrotic [11].*

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10. Image 1 Courtesy: Wikipedia.

11. Image 2 Courtesy: Science direct.

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