

Cytological Diagnosis of Testicular Rhabdomyosarcoma Presenting as Left Supraclavicular Lymph Node Metastasis: A Rare Presentation

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BACKGROUND

- Rhabdomyosarcoma comprise embryonal, alveolar, pleomorphic and spindle/sclerosing types.
- Adequate clinical information is essential to narrow the differential diagnosis of such lesions
- Histopathology is considered as gold standard for diagnosis.
- We present a cases of Testicular rhabdomyosarcoma diagnosed on detailed cytological workup.

CASE REPORT

CASE: A 15 year old male presented with palpable right testicular mass with extension up to right lumbar and right iliac fossa measuring 15x10 cm since 4 months.

- Examination revealed a small left supraclavicular lymph node enlargement was also noticed measuring 1x1 cm.
- CECT Abdomen showed large lobulated minimally enhancing mass, surrounding aorta, displacing and compressing IVC, with extension into kidney.
- CECT Thorax showed multiple irregular mass lesions in both lungs.
- Patient was advised FNAC from left supraclavicular lymph node. Smears comprising of round cells with round to oval shaped nuclei. Cells showed scant to moderate eosinophilic cytoplasm with few eccentric nuclei on a myxoid and hemorrhagic background.
- Cyto-smears showed round cells with positivity for Desmin and Myogenin on immunocytochemistry which performed on cell block.
- Biopsy from right testicular mass was received.
- IHC's were applied which come positive for CD99, Vimentin, Desmin and Myogenin.
- The case was confirmed as primary embryonal Rhabdomyosarcoma of testis.

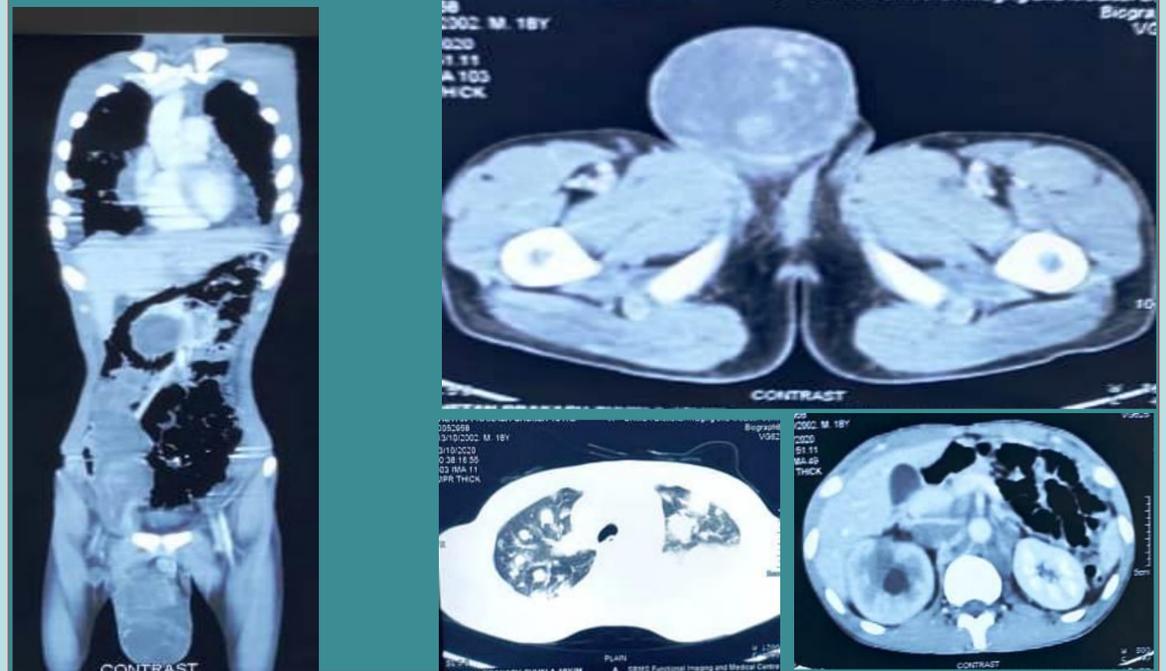


Fig-1(CECT Abdomen And Thorax): Shows large lobulated minimally enhancing mass arising from right testis, surrounding aorta, displacing and compressing IVC, with extension into kidney. CT Thorax showed multiple irregular mass lesions in both lungs.

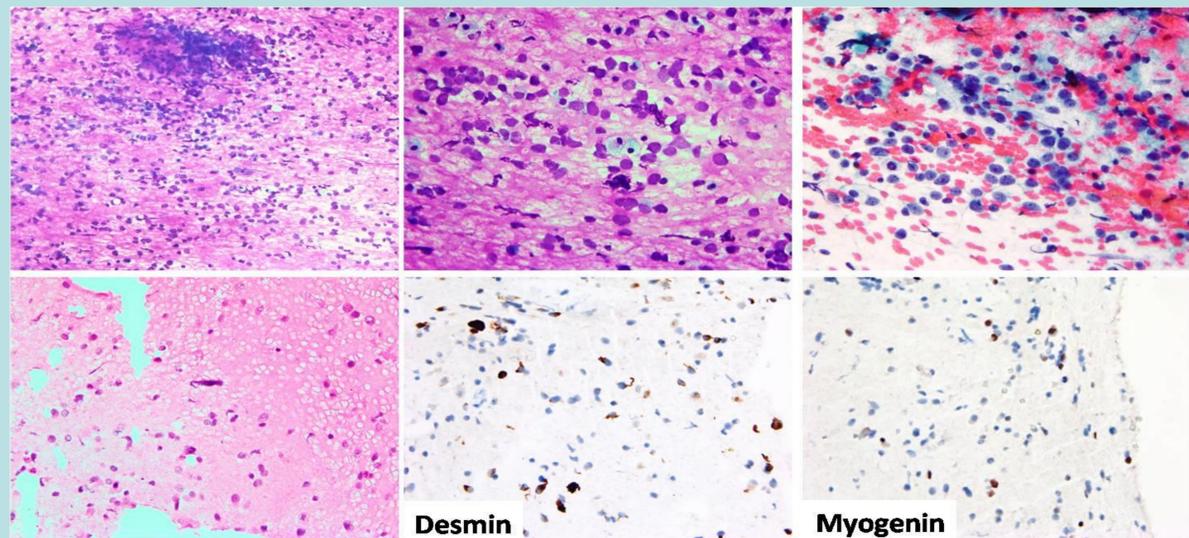


Fig-2 Cytosmear showing moderately cellular smears comprising of round cells with round to oval shaped nuclei in a myxoid background with positivity for Desmin and Myogenin on Immunohistochemistry.

DISCUSSION

- Rhabdomyosarcoma (RMS) is the most common type of sarcoma of children and adolescents that resemble developing skeletal muscle.
- RMS Types includes embryonal (~60%), alveolar (~20%), Pleomorphic (~10%)& spindle/sclerosing (~10%).
- Most prominent sites involve head & neck structure (~40%), genitourinary tract(~25%), and extremities (~20%).
- A testicular localisation is a rare and represents only 7% of RMS and a testicular RMS involving supraclavicular lymph node is unusual.

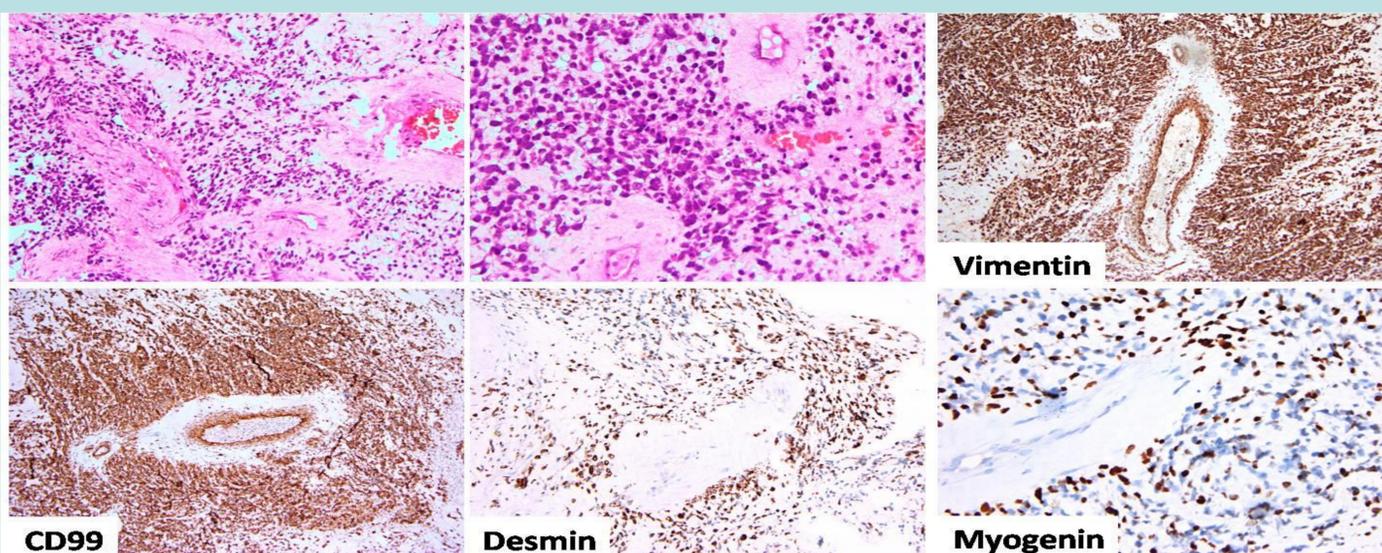


Fig-3. Sections from testicular biopsy showing a round cell tumor with peritheliomatous arrangement and myxoid background with positivity for Vimentin, CD99, Desmin, and Myogenin on IHC

CONCLUSION

FNAC offers rapid diagnosis in lesions, ruling out malignancy in benign conditions and typing of the malignancies. Aspirated material can be used for other ancillary techniques like immunocytochemistry and flowcytometry to further enhance specificity. This can save time, may increase specificity and even replace histopathology.

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