



DIAGNOSTIC DILEMMA IN ROUND CELL TUMOR DIFFERENTIAL DIAGNOSIS, EWING'S SARCOMA VERSUS NON HODGKIN'S LYMPHOMA! A CASE REPORT .

Oncology

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ABSTRACT

Round cell tumours overwhelming majority of malignancies seen in children. These tumors are composed histologically of small round cells with scanty basophilic cytoplasm and include a variety of tumors such as malignant lymphoma, Ewing's sarcoma, neuroblastoma, rhabdomyosarcoma, Wilms' tumor, retinoblastoma and malignant small round cell tumor of thoracopulmonary region. The differential diagnosis of these tumors may be difficult at light microscopic level, but is helped considerably by electron microscopic evaluation. Fine-needle aspiration biopsy (FNAB) is now being used with increasing frequency for the diagnosis of various benign and malignant neoplasms from a variety of location. However, this technique has not been applied extensively in the diagnosis of round cell tumors in children because of difficulty in making a precise diagnosis at the light microscopic level.

KEYWORDS

Fine needle aspirations cytology FNAC, electron microscopy

CASE REPORT

A 15 year old girl Histopathologically diagnosed a case of Round cell tumour of right foot with differential diagnosis Ewing's sarcoma and non Hodgkin's lymphoma advised for immunohistochemistry .

Within 6 month of completion of her treatment (as chemotherapy VAC regime for Ewing's sarcoma and Radiotherapy full course 60 Gy in 30 fractions by external beam CO⁶⁰ five fractions per week) She develops new bony lesion on upper one third end of tibia as severe pain and swelling as well as lesion on skull bone along huge swelling on left side of her jaw fnac from jaw site was reported as Non Hodgkin's lymphoma , Patient again started chemotherapy CHOP regime and take up as fresh case in view of her young age and Non Hodgkin's lymphoma a her final diagnosis, she shown excellent response to her treatment further case considered for detail discussion in tumour board for expert opinion for her further treatment .

DISCUSSION

Malignant round cell tumours are characterized by small round . relatively undifferentiated cells they are generally includes Ewing's sarcoma, PNET tumours, Rhabdomyosarcoma, synovial sarcoma , Non Hodgkin lymphoma , Retinoblastoma, Neuroblastoma, Hepatoblastoma, Wilms tumors , small cell osteogenic sarcoma . Tumours which Shows good differentiations are relatively easy to diagnose as seen in several; study reports, FNAC, fine Niddle aspirations cytology has become an important tool for diagnosis of round cell tumours but it's have a limitations that it cannot gives you details about the type, and grade of tumours on histological examinations so biopsy is an very vital tool which can tells us about prognosis of types of tumours, Ultra structural diagnosis of FNAB material is based on the same general principles used for ultra structural evaluation of other types of biopsy specimens; however, since the amount of material available from FNAB is relatively Small, interpretation of ultra structural findings requires considerable experience and expertise on the part of the examining pathologist. A definitive diagnosis should therefore be rendered only when unequivocal morphologic evidence for a particular tumor is present. Another limiting factor in the FNAB Diagnosis of small round cell neoplasm is the degree of differentiation of the tumor. The tumors that show good differentiation are generally easy to diagnose. However, if a tumor is poorly differentiated, a thorough search may be needed for identification of diagnostic morphologic features. In some cases, where the degree of differentiation is extremely poor, no definitive diagnosis may be possible even after a prolonged and laborious ultra structural evaluation.

But last not the least if nothing is working-out we can sought for immunohistochemistry or immunotyping method to get over the limitations of biopsy test , several methods are available today like

flow cytometry , reverse transcriptase polymerase chain reactions (RT-PCR), fluoresce in situ hybridization FISH, however recent characterization of chromosomal break point and its corresponding genes involved in malignant small round cell tumours that means molecular genetics approach are upcoming Gold tools for not only diagnosis of malignant tumours rather, its directed focused chemotherapy or immunotherapy is the most recent method of management of round cell tumours .

CONCLUSION

Round cell tumours, are many types found and different types of rounds cells tumours require entirely different types of treatment strategy, So only by reports of Fnac we should avoid starting the treatment even if biopsy is in doubt we can sought immunohistochemistry test to get confirmed the diagnosis in order to have correct line of management about the types of round cell tumour.

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