
Egyptian examples of soft tissue sarcomas, pathological and immunohistochemical study

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soft tissue sarcomas appear in different guises and can mimic various reactive soft tissue lesions and epithelial neoplasm thus there is a need for accurate histological diagnosis. Many sarcomas are too poorly differentiated (undifferentiated) to exhibit morphological features specific enough to define their histogenesis or true origin. So that accurate identification by morphological criteria alone is limited. Histochemical stain and immunohistochemical techniques may help to reduce the size of this category. In this work and besides the routine light microscope, we used a combination of histochemical stain confirmed by immunohistochemical stain to improve accuracy of diagnosis. Also this study aims at evaluation of the proliferative activity of different soft tissue sarcomas lesions by silver-stained nucleolar organizer regions which correlate their results with histological type and grade. In this study, 50 biopsy specimens of soft tissue sarcomas received at Pathology Department, Benha University and Histopathology Department of National Cancer Institute in Cairo in three years periods from November 1995 to December 1998 were used. Specimens were re-cut, stained using hematoxylin and Eosin (H & E stain). Special stains were resorted to Gordon and Sweets for reticulin, Masson trichrome stain for myofibrils and collagen, periodic acid Schiff stain for glycogen and mucoproteins. Alcian blue stain for acid mucopolysaccharides, silver staining techniques for evaluation of AgNORs count and pattern, immunohistochemical staining using: Vimentin for mesenchymal differentiation, alpha-1-antitrypsin as a histocytic marker, desmin for muscle differentiation, alpha-1-smooth muscle actin, a smooth muscle marker to differentiate between skeletal and smooth muscle. The different types of soft tissue sarcomas were categorized according to their histopathological features. 7 cases were liposarcomas (2 myxoid, one round cell, two well differentiated and two pleomorphic), 8 cases fibrosarcomas (3 well differentiated, 2 moderate differentiated, 3 poorly differentiated), 7 M.F.H. (5 storiform pleomorphic and 2 myxoid), 10 cases leiomyosarcomas (5 well differentiated, 5 poorly differentiated), 5 rhabdomyosarcomas (3 embryonal and 2 alveolar) and 13 cases of undifferentiated sarcomas, analyzed by a panel of histochemical and immunohistochemical stains. The AgNORs count correlate significantly and increased gradually with progression of the grade. The mean number of AgNORs / nucleus was (1.1 / nucleus \pm 0.1) in control group, (4.78 / nucleus \pm 0.38) in low

grade cases; (5.89 / nucleus \pm 0.78) in intermediate grade; (8.52 / nucleus \pm 1.17) in high grade and (9.35/ nucleus \pm 0.33) in undifferentiated cases. As regards the AgNORs size and distribution pattern there were differences between normal cells and malignant cells. Round, uniform and has regular sized and shape in normal cells. While the malignant cells were characterized by irregular scattered distribution of NORs and pleomorphic in size and shape. The immunohistochemical markers revealed that : Vimentin marks all connective tissue cells (classified and unclassified). Alpha-I- antitrypsin marked all cases of M.F.H. and cases 6,7 and 8 of unclassified cases. Desmin marked all cases of both leiomyosarcomas and rhabdomyosarcomas and cases 9,10,11,12 and 13 of unclassified sarcomas. Two cases (1 and 4) of unclassified cases still undiagnosed.