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Title: Malignant mesothelioma vs metastatic carcinoma of pleura: Do pathology and radiology agree?

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Body: Introduction: MPM is a rare malignant neoplasm of pleura that represents with several CT features seen in other common pleural malignancies. The aim of this study is to evaluate the agreement of radiology and pathology in differentiation between MPM and metastatic pleural malignancy and to demonstrate most characteristic CT finding of them. Material and Methods: 55 patients, 29 males and 26 females, diagnosed with MPM and metastatic pleural malignancies were enrolled in the retrospective study. The diagnoses were made by pathology based on immuno histo chemistry study. All CT scans were observed to evaluate several parameters and the most probable diagnosis. Results: 17 MPM and 38 metastatic pleural malignancies based on pathology and 22 MPM and 33 metastatic pleural malignancies based on radiology were reported. The most common findings suggestive of malignant pleural mesothelioma were pleural thickening (88.2%), loculated effusion (58.8%) and thickening of interlobar fissure (47.1%) whereas free pleural effusion (71.7%), parenchymal infiltration (65.8%) mostly massive and pleural thickening (63.2%) were most prevalent parameter of metastatic cases. Regarding differentiating between MPM and metastatic pleural malignancy by pathology and radiology, kappa coefficient was 0.56 in our study which indicates moderate agreement. Conclusion: considering P-value < 0.05, pleural thickening and thickening of interlobar fissure lead us to MPM diagnosis and massive free pleural effusion is more seen in metastatic pleural malignancies. kappa coefficient of 0.56 in our study indicates there is moderate agreement between radiology and pathology on differentiating between malignant pleural mesothelioma and metastatic pleural malignancy.