

Role of PAX8 in the Screening Immunocytochemistry Panel for Carcinomatous Effusions in Women

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Abstract:

Introduction and Objectives: Many of malignant effusion cases with unknown primary have cytomorphological overlap. Due to this diagnostic difficulty, immunocytochemistry (ICC) on cell block can be used to get insight into the primary site. It was aimed to evaluate addition of PAX8 in the screening ICC panel for carcinomatous effusions in women.

Methods & Materials: Total 892 effusion samples were evaluated, out of which 75(8%) (50 women & 25 men) comprised of carcinomatous effusion. Study included 44/50 (88%) (38 peritoneal & 6 pleural) samples with adequate cell blocks. Primary panel of ICC markers comprised of calretinin, CK7, CK20, CDX2, WT1, mammoglobin, CK 5/6 and PAX8.

Results: On follow up, the commonest site of primary malignancy (35/44) was ovary with sensitivity, specificity, positive predictive value and negative predictive value of CK 7- 97.14%,11.11%, 80.95 & 50%, of WT-1-51.4%,100%, 100% & 34.6%, of PAX8 71.43%,100%, 100% & 47.37% and of combined WT-1 & PAX8 74.29% ,100 %, 100% & 50% respectively.

Conclusion: Most common cause of carcinomatous effusion among women was was ovary followed by Breast, gall bladder and GIT. WT-1 is a highly sensitive and specific marker for ovarian malignancies, however its sensitivity is lesser than PAX-8. WT-1 is also expressed in mesothelium and is unable to detect mucinous and clear cell adenocarcinoma of ovary, however PAX-8 can identify all Müllerian derived benign or malignant epithelial neoplasms. Since ovarian carcinoma is the commonest cause of malignant effusion among women, it is worth to include Pax-8 with other markers in the screening ICC panel.



Biography :Dr. Anurag Gupta has completed his MD at the age of 31 years from Allahabad University and did senior residency from All India Institute of Medical Sciences, New Delhi, India. He is the Professor of Pathology at Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow, India. He is in-charge of cytopathology laboratory with special interest in cytopathology, breast pathology and onco-pathology. He has published more than 15 papers in reputed journals and has been serving as Secretary Indian Academy of Cytologists-U.P. Chapter.

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