

POSTER 9

Exploring Caveolin-1 expression profile in neuroendocrine tumours of the gastrointestinal tract and pancreas

A. Katakis¹, I. Angelioudaki², E. Koniaris, A. Mitrousias², A.G. Tzingounis², L. Stoupis², I. Papakonstandinou², N. Dafnios², G. Giogkas², G. Zografos¹, M.M. Konstadoulakis²

¹ First Department of Propaedeutic Surgery, "Hippokratio" General Hospital, Athens, Greece

² Second Department of Surgery, Aretaieion Hospital, Medical School, NKUA, Greece

³ Department of Pathology, "Hippokratio" General Hospital of Athens, Greece

Presenting author: Agapi Katakis (e-mail: akatakis@med.uoa.gr)

Background & Aim: Neuroendocrine neoplasms (NENs) include distinct clinical entities which are classified as carcinomas (NECs), and tumours (NETs) and can be developed in different sites along the gastrointestinal tract (GI). Since understanding their carcinogenesis process is crucial for their clinical management, the present study is focusing on exploring the expression profile of caveolin-1 protein in these rare neoplasms, as caveolin-1 plays a critical role in various cellular processes.

Patients/Methods: Study's cohort consisted of 29 NETs (mean age 61.93±2.09), of which 20 are located in pancreas (pNET) and the others in appendix/stomach/ small intestine & duodenum (giNET); 20 NECs (mean age 65.3±2.39): 11 in pancreas (pNEC) and 9 along GI (giNET); and 7 MANEC (mean age 67.56±2.62) of which 2 are located in pancreas (pMANEC). Caveolin-1 expression was detected immunohistochemically, and both percentage of positive cells and intensity were scored in both lesions and normal adjacent epithelium and stroma. Their multiplication score was used in statistical analysis which was performed using SPSSv28.0.

Results: No caveolin-1 expression was detected in NET lesions epithelium. Expression in tumour stroma was present and significant increased in giNETs ($p=0.007$). In contrast, within NECs group, protein expression was only detected in cancer epithelium of pNECs ($p=0.05$), whereas no statistical difference was found in cancer stroma expression between the two groups. Similarly, caveolin-1 expression was only detected in pMANEC lesions epithelium ($p=0.016$).

Conclusion: The herein presented data indicates that these rare neoplasms present unique site-specific traits and they further support a relation between caveolin-1 expression and tumour's aggressiveness.

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