Exploring Syndecan-1 expression profile in neuroendocrine tumors of the grastointestinal tract and pancreas.

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Neuroendocrine neoplasms (NENs) can be developed in different sites along the gastrointestinal tract (GI) and are classified as tumours (NETs) and carcinomas (NECs). The present study is focusing on exploring the expression profile of syndecan-1 protein (SDC-1).

Study's cohort consisted of 29 NETs mean age 61.93±2.0 mean age 65.3±2.39, 20 located in pancreas (pNET) and 9 in the GI (giNEC); 20 NECs: 11 located in pancreas (pNEC) and 9 along GI (giNEC); and 7 MANEC mean age 67.56±2.62, 2 of which are in pancreas (pMANEC).

SDC-1 expression was detected immunohistochemically and both percentage of positive cells and intensity were scored in lesions' as well as in normal adjacent tissue. Their multiplication score was used in statistical analysis.

SDC-1 expression was both membranous and cytoplasmic in epithelial cells. A shift from membranous to cytoplasmic expression was observed from normal to lesion's stroma. SDC-1 expression wasn't detected in giNETs lesions' epithelium whereas, epithelium expression was limited to cell membrane in pNETs. In giNECs higher expression of SDC-1 was observed in cancer epithelium compared to pNECs, still without reaching a statistically significant difference. No protein expression was spotted in normal adjacent stroma. Findings were similar in MANEC.

The herein presented data indicate that in these rare neoplasms SDC-1 protein expression profile varied based to their site of origin. In addition, the observed shift of SDC-1 expression from the cell membrane to the cytoplasm further support that its loss of function at the cell-surface may facilitate cancer progression and the development of invasive and metastatic disease.