Goblet cell carcinoid of the appendix in pleural effusion and ascites: a case study

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Clinical Presentation: We received the ascites (500 ml) and the pleural effusion (300 ml) a month apart of the 45-year-old woman with the rare diagnosis of goblet cell carcinoid of the appendix.

Cytological Findings: We observed groups of malignant tumor cells with glandular differentiation, marked nuclear atypia, abundant bloated cytoplasm, with the presence of intracellular and extracellular mucin, so at first the tumor might be mistaken for a metastatic mucinous adenocarcinoma. Immunocytochemistry (ICC) was carried out on both fluid samples and showed Cdx2, CK20 and synaptophysin positive expression, and chromogranin-A negative expression, while Ki67 proliferation index was about 80%.

The diagnosis of goblet cell carcinoid of the appendix with the spread to lymph nodes, omentum, uterine, both ovaries, and left fallopian tube was verified by histology. Immunohistochemistry (IHC) showed that tumor cells were mostly CK20 (95%), CEA (95%), Cdx2 (99%) and β-catenin (80%) positive, partially EMA (50%), MUC 2 (45%), and CK 7 (30%) positive. Only single cells expressed chromogranin-A and synaptophysin. Ki67 proliferation index was 67%.

Discussion: For such rare cases full clinical information and the application of ICC are essential. Only given patient’s medical history, tumor morphology and immunophenotype we were able to make the right diagnosis of goblet cell carcinoid metastasis of the appendix.

The authors declare no conflict of interest.