Extra-intestinal epithelioid gastrointestinal stromal tumour (GIST), an unusual presentation.

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Introduction

We present a case study of a 79 year old male who presented to our hospital with vague abdominal pain. Computer tomography (CT) scan revealed a pancreatic mass and omental lesion. No previous clinical history was provided nor were there any radiological indications within the gastrointestinal tract (GIT). Needle core biopsies of the omental lesion were submitted for histological assessment. Routine H&E stain showed a cellular epithelioid tumour arranged in solid sheets and nests. The morphology of the tumour cells showed a moderate amount of eosinophilic cytoplasm and contained ovoid nuclei with prominent nucleoli. There were 5 mitotic figures per high power field. Necrosis was not evident and the tumour stroma was myxoid with scattered delicate blood vessels. Immunohistochemistry (IHC) was required to classify the tumour.



IHC results

Conclusion

IHC was performed on the Leica Bond III platform.

The summary below outlines the staining results from a range of antibodies.

Epithelial markers	
CK7, CK20, CK8/18, CK Cam5.2, CK AE1/3, EMA	Negative
Lymphoid markers	
CD10, CD30, CD45, CD56, CD138	Negative
Melanoma markers	
S100, Melan A	Negative
Neuroendocrine markers	
Chromogranin A, Synaptophysin	Negative
Gastro intestinal stromal tumour (GIST) markers	
CD34, CD117a, DOG-1	Positive

The Ki-67 index is a marker for cellular proliferation and was calculated to be approximately 20% indicating a non-aggressive growing neoplasm.

GISTs arise from the specialised interstitial cells of Cajal found within the GIT. In association with smooth muscle and enteric neurons, these cells play an important role in gastrointestinal motility. Most GISTs commonly develop within the stomach and small intestine. This case study however, highlights a rare extra-intestinal GIST which was found in the omentum and required a large panel of IHC antibodies to categorise. A pancreatic primary tumour could not be excluded. Diagnostic classification and prognosis involves assessments of tumour size, mitotic activity, cellularity, nuclear grade and necrosis. A combination of these features identifies GISTs that are of low risk against those that are at high risk of metastasis. H&E morphology alone was not helpful in identifying the type of tumour in this instance. The contribution and indeed, the importance and relevance that IHC is to a modern diagnostic Anatomical Pathology laboratory has been demonstrated with this case study.

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