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Case Report

Tinted glass sees the clear diagnosis: sign of ovarian mucinous cystadenoma

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ABSTRACT

Ovarian mucious cystadenoma are commonly affecting the women with age group of 20-40 years and benign in nature. Due to varying cystic contents within heterogeneous signal intensities are noted on MRI looks like stained-glass window sign and acts as a distinguishing characteristic. Recognizing the stained-glass window sign enables timely and accurate care of ovarian neoplasms and increases diagnostic confidence.

Keywords: Tinted glass, Ovarian malignancy, Mucinous cystadenoma

INTRODUCTION

Ovarian neoplasms represent a diverse spectrum of tumours, with mucinous cystadenomas being one of the notable benign epithelial variants. These tumours primarily affect young women aged 20 to 40 years and are characterized by their large, cystic nature arising from the ovarian surface epithelium.[1]

Mucinous cystadenomas account for approximately 30% of all ovarian neoplasms and typically present as multiloculated cystic masses.[1]

Differential diagnosis among ovarian tumours often relies on imaging modalities and magnetic resonance imaging (MRI) is best for accurate diagnosis and subsequent management decisions. Few signs are specific for the neoplasm and stained-glass window is one of them to make the diagnosis.[2] We are presenting a case of ovarian tumour showing stained glass window sign shown in the Figure 1 below.

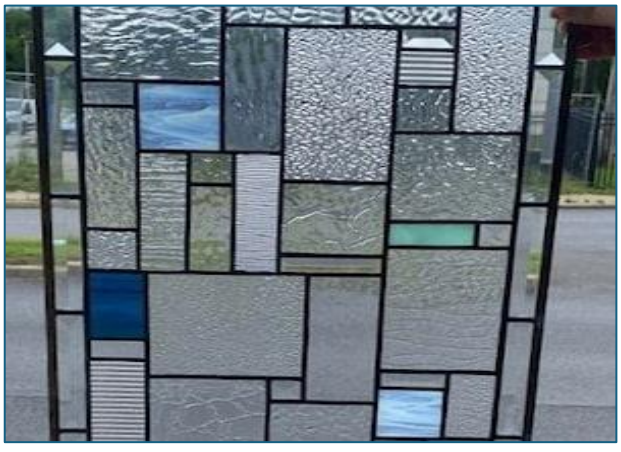

Figure 1: Multiple stained pieces in the window glass.

CASE REPORT

A 26-year-old female presented with acute right iliac region pain, prompting an emergency USG examination that identified a cystic lesion arising possibly from the left

ovary. Subsequent MRI evaluation revealed a large cystic lesion in the pelvis originating from the left ovary. The lesion demonstrated hypointense signal on T1-weighted images and hyperintense signal on T2-weighted images. Within the cystic structure, multiple loculi and septa exhibited variable signal intensities on T2-weighted imaging, resembling a stained-glass window appearance (Figure 2). This characteristic MRI finding suggested a diagnosis of mucinous cystadenoma. Post operative histopathological diagnosis confirmed our diagnosis established on MRI.

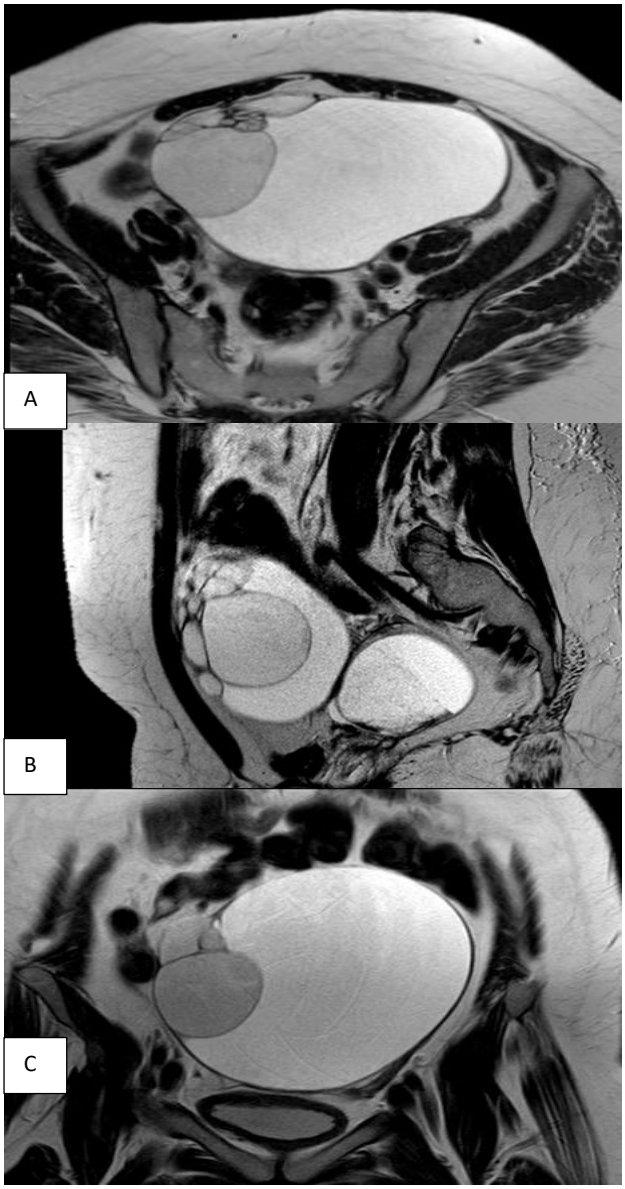

Figure 2 (A-C): Axial, sagittal and coronal MRI T2W images showing large hyperintense lesion with multiple loculi and septa exhibited variable signal intensities within.

DISCUSSION

The stained-glass window appearance observed on MRI is a distinctive feature associated with mucinous cystadenomas. This imaging pattern arises from the heterogeneous composition of the cystic contents, including varying levels of protein-rich mucinous fluid, hemorrhage, and necrosis within individual loculi and septa.[3] Such variations manifest as differing signal intensities on T2-weighted MR images, creating a mosaic effect akin to coloured glass pieces in a stained-glass window. This visual characteristic aids in distinguishing mucinous cystadenomas from other ovarian neoplasms, particularly serous cystadenomas, which typically exhibit more uniform signal attenuation on MRI. While the stained-glass window sign is strongly predictive of mucinous cystadenoma, it is important to note that other ovarian malignancies, including tumors with cystic degeneration, teratoma, endometriomas, and Brenner's tumor, can also have similar MRI results.[4] Thus, clinical correlation, sometimes additional diagnostic procedures and histopathological correlation are necessary to confirm the specific diagnosis.

CONCLUSION

In conclusion, the stained-glass window sign shown on MRI is a useful imaging feature that helps to more confidently diagnose mucinous cystadenomas.

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