

Case Report:

An unusual case of sphenoid wing meningioma and adenocarcinoma of the caecum

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ABSTRACT

Background: Sphenoid wing meningiomas are common in females and association with colon cancer in females is known. An unusual case of meningioma with co-existent caecal cancer is being reported in a male patient.

Case description: A 76-year-old male patient diagnosed with left lateral sphenoid wing meningioma underwent total excision of the tumour. Post-operatively he developed intestinal obstruction due to perforation of colonic growth. Histopathology confirmed the lesion as adenocarcinoma. The patient succumbed to septic shock.

Conclusion: The uniqueness of male presentation and a perforated colonic cancer manifesting post-operatively has not been reported in the past. The possibility of syndromic presentation should always be kept in mind.

Keywords: Meningioma, Sphenoid wing, Adenocarcinoma colon, Syndrome

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INTRODUCTION

Sphenoid wing meningioma is a common entity in females worldwide.¹ Meningiomas constitute 15%-20% of primary brain tumours of which sphenoid wing meningiomas account for 16%.² In the past association of meningiomas with colon cancer has been described in middle aged females.³ We describe a unique case of sphenoid wing meningioma in an elderly male patient in association with perforated colonic cancer.

CASE REPORT

A 76-year-old male patient presented with history of headaches and altered behaviour for one month. Magnetic resonance imaging (MRI) of brain revealed a contrast enhancing extra-axial lesion arising from left lateral sphenoid wing associated with midline shift and oedema (Figure 1). Patient underwent left fronto-

temporal craniotomy whereby a dural based, vascular, firm tumour was encountered and totally excised with coagulation of dural base. Post-operatively patient developed transient right-sided hemiparesis which showed gradual improvement. While being planned for discharge on seventh postoperative day patient complained of pain abdomen and distension. Computed tomography (CT) of abdomen revealed large caecal mass (Figure 2) for which a right sided hemicolectomy with end colostomy was performed. Intra-operative findings were of a large perforated caecal mass with peritonitis suggestive of adenocarcinoma stage T4N1M0 (Duke's C). Post-operatively patient developed septic shock and he succumbed despite aggressive management in the intensive care unit (ICU). Histopathology (Figure 3) of brain tumour showed meningiothelial meningioma World Health

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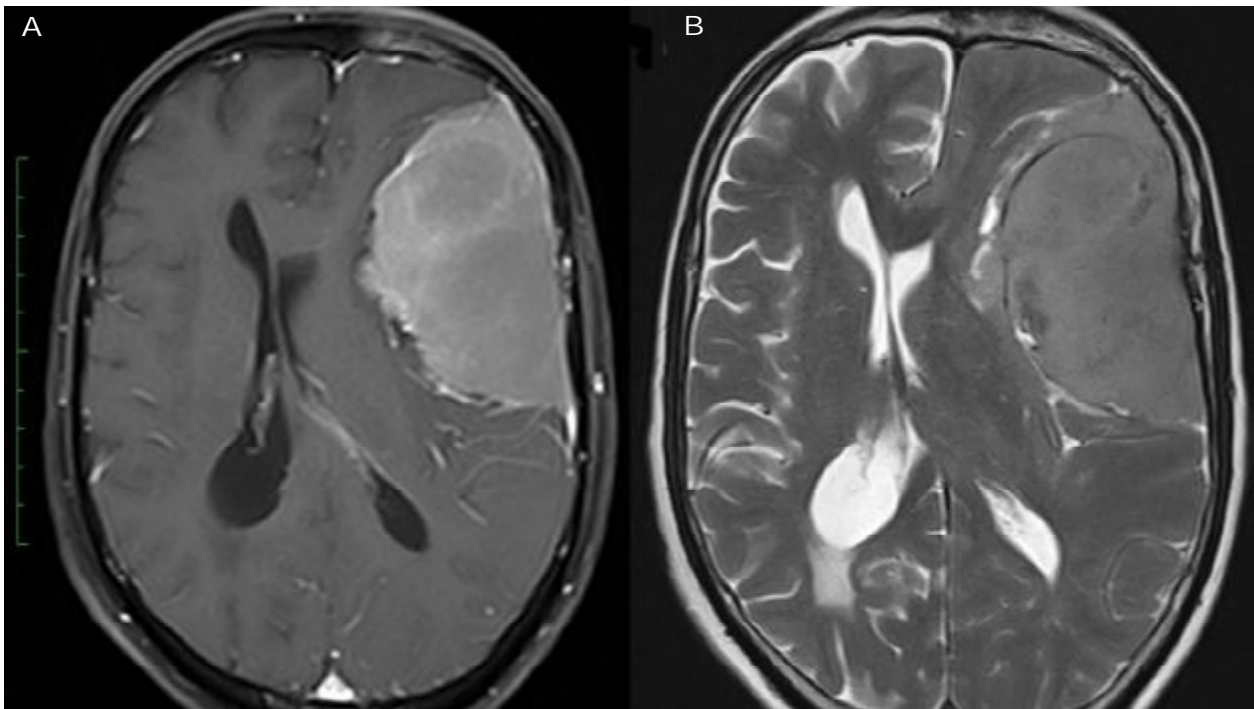


Figure 1: Contrast-enhanced axial MRI image of brain showing extra-axial homogeneously enhancing lesion in the left lateral sphenoid wing region (A). T2-weighted image of the same area showing surrounding oedema and shift (B) MRI = magnetic resonance imaging

Organisation (WHO) grade 1 and that of colon showed mucinous adenocarcinoma of the caecum with perforative peritonitis and lymph node involvement. The meningioma slides were reviewed for metastatic deposit, after

second surgery and was found free of deposits. A belated history from the relatives revealed features suggestive of sub-acute intestinal obstruction in the past for which he received a brief treatment in a local hospital for which no obvious cause was found.

DISCUSSION

The association of meningiomas and other primary malignancies is known, breast malignancy being common because of the hormonal receptor involved in both.⁴ The alteration in (BRCA 1) and two genes in meningiomas associated with carcinoma breast has been described.⁵ The association of colorectal cancers and meningiomas is attributable to many syndromes and hyperinsulinemia.⁴ Syndromes like Gardner's, Cowden's, Turcot's, which are common in females, show association between colorectal cancers, familial adenomatous polyps and extra colonic manifestations like thyroid, breast, benign and malignant brain tumours.³ Increased risk of renal cancer in male patients

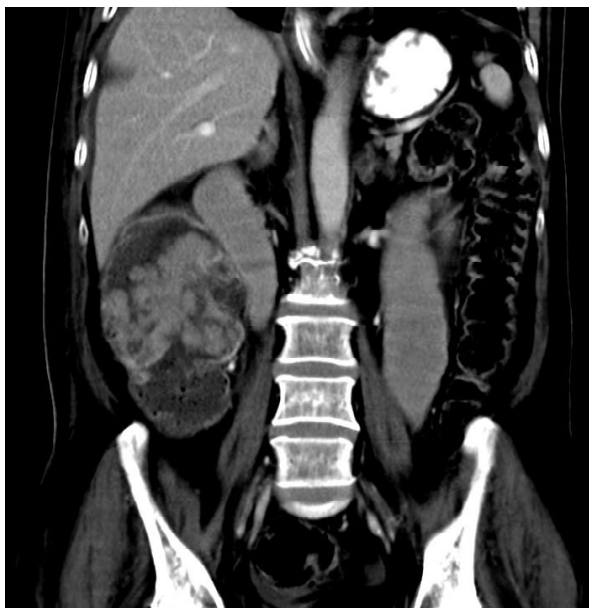


Figure 2: Contrast-enhanced CT (coronal section) of abdomen showing a proliferative growth in the caecum suggestive of carcinoma CT = computed tomography

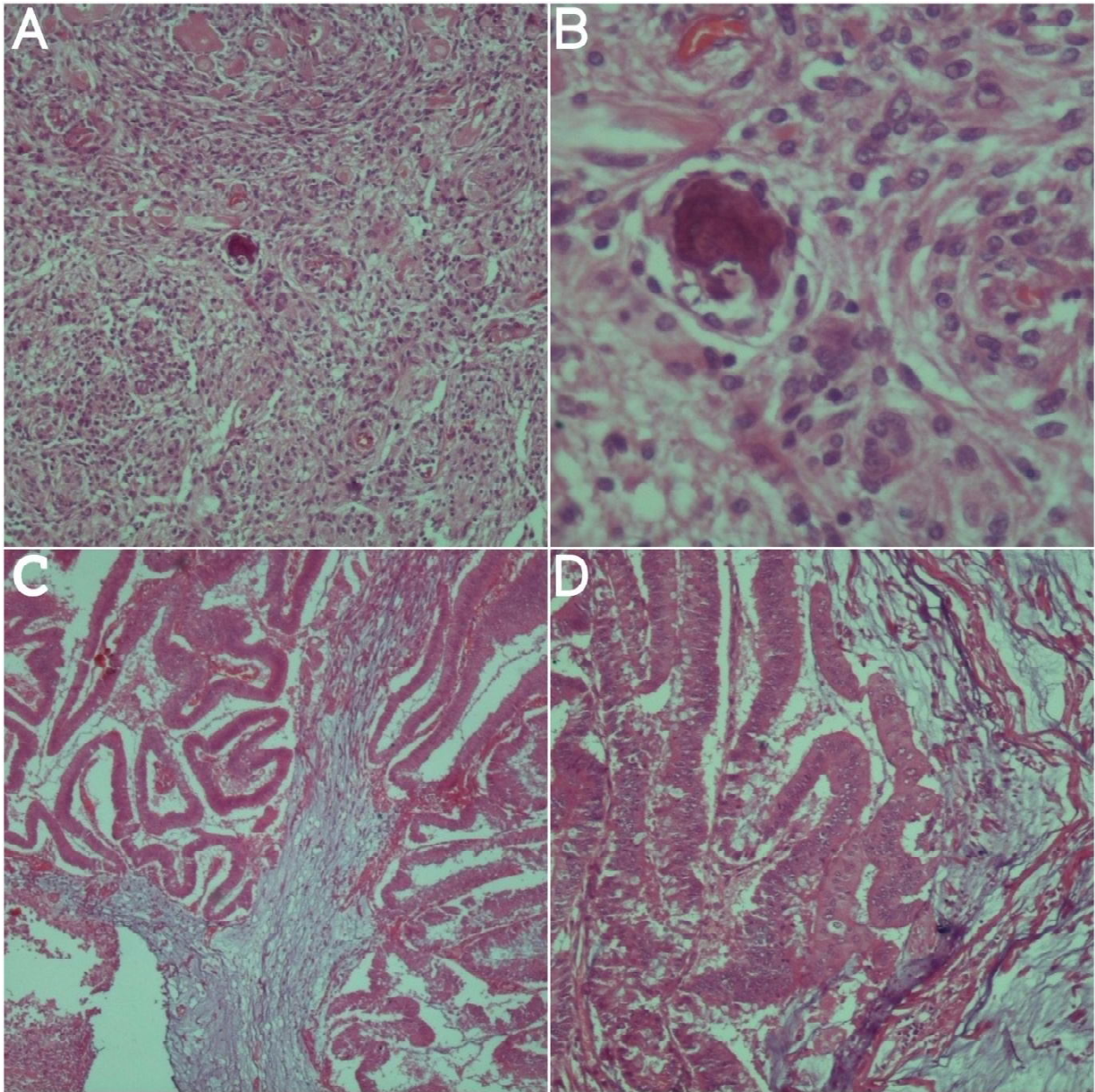


Figure 3: Photomicrograph of the excised tumour showing meningothelial meningioma. Meningothelial cells arranged in whorls. Occasional psammoma body is also seen. [Haematoxylin and eosin $\times 100$ (A) and $\times 400$ (B)]. Mucinous adenocarcinoma of colon with tumor arranged in varying sized glands in a mucinous stroma. [Haematoxylin and eosin $\times 100$ (C) and $\times 400$ (D)].

of meningioma has also been described.⁴ Sixty per cent of sporadic meningiomas in the skull base region have mutation in neurofibromin (NF2) gene while a small number constitute part of various genetic syndromes, with a tendency to be more aggressive.⁶ Tumour to tumour metastasis is described in literature though rare and meningioma is the most common intracranial tumour to host metastasis. Breast and lung cancers are among the common

tumours to metastasize into meningiomas and one case of colorectal spread is also described.⁷ There was no metastasis noted in the meningioma specimen in this case.

Though association between meningiomas and colorectal cancer is reported in literature, however the occurrence in clinical practice is uncommon. Most cases reported till date are middle aged females with manifestation of gastrointestinal malignancy as the initial

symptom. However to the best of our knowledge, there is no report of male patient having association of meningioma with colon cancer and that also with perforation, as described in the present case. Also the symptoms of colon cancer in the present report, unlike earlier studies, manifested in the post-operative period following excision of the meningioma. Historically, it seems, an unsuspected episode of sub acute intestinal obstruction was ignored, as it had a brief and self-remitting course. The uniqueness of this case lies in its presentation at older age in a male patient, located in lateral sphenoid wing without any vivid clinical features of colonic cancer prior to the brain surgery. However, genetic evaluation for further documentation was not possible as the patient died of fulminant peritonitis. It is therefore concluded that the possibility of syndromic presentation should always be kept in mind when dealing with meningioma patients, as its course and outcome might be different from non syndromic varieties.

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