Primary peritoneal psammocarcinoma - as nodular mass lesions on the serosa of large bowel

Sir,

Primary peritoneal psammocarcinoma (PPP) is a relatively newly identified entity, a subtype of primary peritoneal serous carcinoma, and is characterized by abnormal carcinomatosis of the peritoneal cavity, with minimal or no involvement of the ovaries.[1] PPP should be differentiated from papillary adenocarcinoma of the ovary and peritoneal mesothelioma, which has an aggressive course.

The clinical behavior of PPP is variable; majority of them show a relative favorable prognosis and some PPP may show recurrences and metastasis.

In this paper, we report a case of PPP.

The case details are as follows. A 55-year-old post-menopausal woman presented with pain in abdomen. Imaging revealed an ileocaecal mass. At laparotomy, multiple nodular mass lesions on the serosal surface of the large intestine were identified, which is an unusual presentation. A right hemicolectomy was done.

Gross examination: A right hemicolectomy specimen comprising 12 cm long ascending colon, caecum with appendix and 15 cm long ileum was submitted for histopathological examination.

The serosal surface of the caecum and ascending colon were studded with multiple gray white nodular lesions of size ranging from 1 to 3 cm in diameter. C/S of the bowel segment showed intact mucosa [Figure 1]. *Microscopic examination:* Multiple sections from the serosal nodules showed tumor cells arranged predominantly in papillary patterns, gland patterns, and cystic spaces, with almost 75% of papillae associated with psammoma bodies.

Individual cells are uniform looking, round to oval with pale scooped out nuclear chromatin and scanty cytoplasm [Figure 2].

Initially, primary peritoneal tumors were classified as mesotheliomas, because the two malignancies were thought to have a common ancestry. However, epidemiologic studies revealed significant differences between the two diseases;

PPC is histologically identical to epithelial ovarian carcinoma. The main differentiating feature is advanced peritoneal involvement of tumor without gross involvement of the ovaries.[2]

Pathological characterizations of psammocarcinoma of peritoneum have been reported previously, by Gilks *et al*., who described 11 cases of psammocarcinoma, eight of the ovary and three of the peritoneum.

The diagnostic criteria defined for PPP are as follows.

i. No more than moderate nuclear atypia.
ii. No areas of solid epithelial proliferation except for occasional nests.
iii. At least 75% of the papillary or nests associated with or completely replaced by psammoma bodies[3,4].

Many of these cases, which have been reported, had extraovarian spread and peritoneal seedling with or without involvement of ovaries.

In the present case, a 55-year-old post-menopausal woman showed extraovarian peritoneal seedling, involving serosal surface of the caecum and ascending colon. Ovaries appeared normal in size and morphology. Histology of the present case showed many psammoma bodies associated with papillae and nests of tumor cells and the individual cells showed low-grade cytological features.

Ovarian and peritoneal psammocarcinomas are quite rare and because of this, knowledge of their behavior

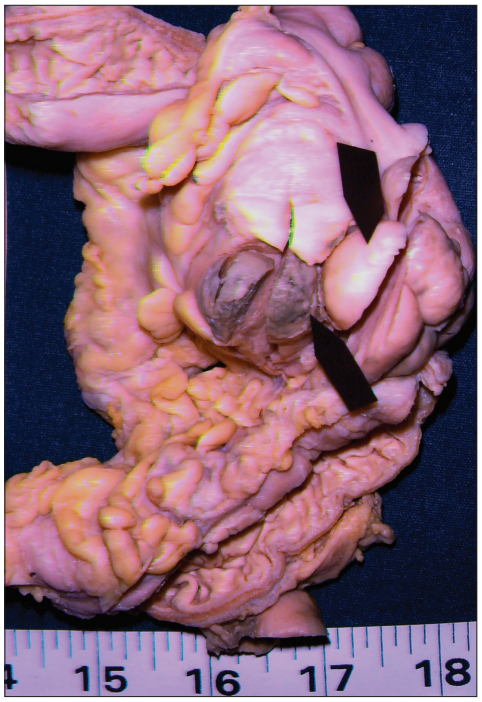

Figure 1: Right hemicolectomy specimen, with the arrows pointing, the serosal nodules on the caecum and ascending colon

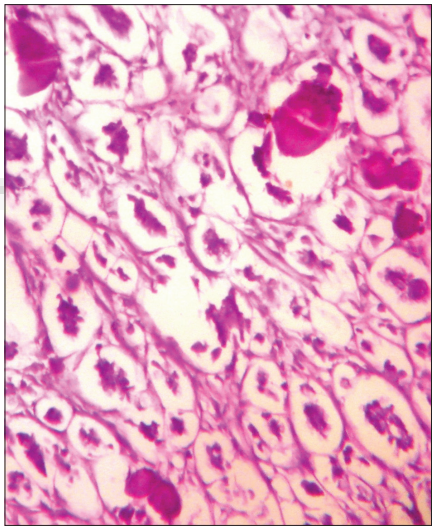

Figure 2: Papillae and nests of tumor cells, associated with plenty of psammoma bodies – ×100, H and E stain

is limited. However, most seem to follow an indolent course, similar to that of borderline lesions of the ovary.[4] But on the other end of spectrum, a few cases with recurrence and distant metastases are also reported.[5]

In the present case, the patient, despite not receiving adjuvant treatment, is still alive 24 months after initial diagnosis, without the signs of metastasis or disease recurrence.

Decisions regarding management should be individualized, with a close periodic follow up for possible recurrence.

Ramana Kumari P, Rao Nuthaki S

Ramani Histopathology Laboratory, Janardhani Hospital, Guntur, Andhra Pradesh, India

Correspondence to: Dr. Kumari P Ramana,
E-mail: ramanihistopathologylab@gmail.com

References

1. Cormio G, Di Vagno G, Di Gesù G, Mastroianni M, Melilli GA, Vimercati A, *et al*. Primary Peritoneal Carcinoma: A Report of Twelve cases and a Review of the Literature. Gynecol Obstet Invest 2000;50:203-6.
2. Goff BA. Primary peritoneal cancer -chapter 41. Gynecological cancer- controversies in management. PhiladelphiaElsevier; 2004. p. 527-39.
3. Gilks C Blake, Bell DA, Scully RE. Serous psammocarcinoma of the ovary and peritoneum. Int J Gynecol Pathol 1990;9:110-21.
4. Weir MM, Bell DA, Young RH. Grade-I peritoneal serous carcinomas a report of 14 cases and comparison with peritoneal serous psammocarcinoma and 19 peritoneal serous borderline tumors. Am J Surg Pathol 1998;22:849-62.
5. Akbulent M, Kelten C, Bir F, Soysal ME, Duzcan SE. Primary peritoneal serous psammocarcinoma with recurrent disease and metastasis: A case report and review of literature. Gynecol Oncol 2007;105:248-51.

Access this article online

Quick Response Code:

Website: www.indianjcancer.com

DOI: 10.4103/0019-509X.82883

PMID: 21768680