Case Report/รายงานผู้ป่วย

Perianal Mucinous Adenocarcinoma associated with a Long Standing Fistula in Ano: Report of a Case and Review of the Literature.

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Abstract

Perianal mucinous adenocarcinoma presented with chronic perianal abscess is a rare disease. Early diagnosis is difficult and need a high index of suspicion and adequate biopsy. Most surgical option for operable cases is abdominoperineal resection. There are still no standard regimen for pre- or post operative chemoradiation treatment. Here, we report a case of this that was previously presented with a long-standing fistula in ano and a review of the literature on this rare disease.

Keywords: Perianal mucinous adenocarcinoma, perianal abscess

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Introduction

Anal carcinoma is a rare malignant disease. It's account for approximately 1 percent of all reported gastrointestinal tumor.[1] Mucinous adenocarcinoma of the perianal region is even extremely rare, though its incidence is rising.[2] Early diagnosis is difficult and needs high index of clinical suspicion, good preoperative imaging and adequate biopsy, so establishing an early diagnosis is difficult.[3] Here, the author reported a case of perianal mucinous adenocarcinoma associated with longstanding fistula in ano.

Case report

A 62 year-old Thai man with a medical history of well-controlled diabetic mellitus presented with a chronic, intermittent fistula in ano for 20 years. Surgical drainages had been performed twice by other hospitals before visiting Ramathibodi Hospital. There was still an intermittent perineal discharge which became better after antibiotic therapy. On physical examination, there was an abscess with a small external opening at 8 o'clock of the anus. Abscess drainage was done and pus was found mixed with mucous material. A sampling of tissue was sent for pathologic study which sub-sequently reported "mucinous lesion of uncertain nature". A CT scan of the abdomen was performed which found a large, 7.5 x 6.4 cm lobulated mass at the anus with extension into the rectum and subcutaneous tissue with no distant metastasis. Magnetic resonance imaging of the buttock and anal region showed a large, well-defined, multiloculated, hyposignal T1/hypersignal T2 mass occupying almost the entire right ischio-anal fossa, extended partly into the left ischio-anal fossa and subcutaneous tissue. The lesion involved the anal sphincter and levator ani muscle. No significant enlarged regional lymph node was seen. (figure 1, and 2) Colonoscopic examination revealed normal mucosa. He underwent a second operation and wide excision was done during which a complex fibrous, mucous mass was found and sent for pathologic examination. This second specimen was reported as a well differentiated mucinous adenocarcinoma. Immunohistochemical studies gave a positive result for cytokeratin (CK) 7, and CK 20. The patient finally underwent an abdominoperineal resection with a wide excision of the tumor at the anus followed by postoperative chemoradiotherapy.

Discussion

According to the WHO definition, adeno-carcinoma of the anal canal is a malignant tumor that may arise from a mucosal, or extramucosal site (anal

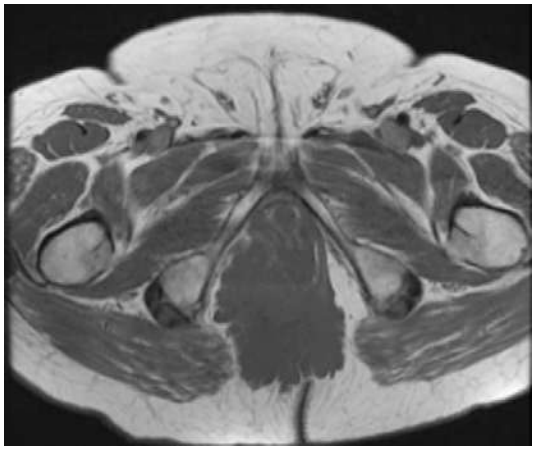

Fig.1 *An axial T1-weighted MRI shows a hyposignal well-defined mass within right ischio-anal fossa*

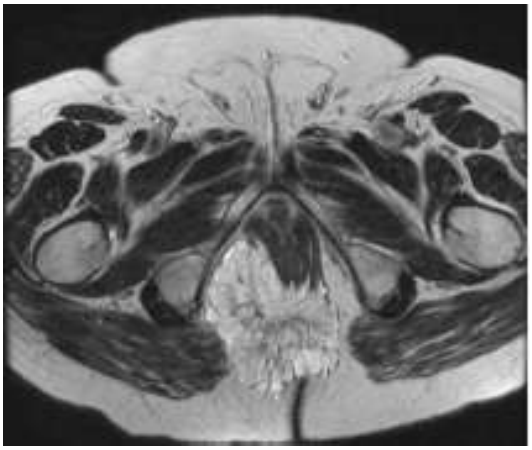

Fig.2 *An axial T2-weighted shows a hypersignal appea-rance.*

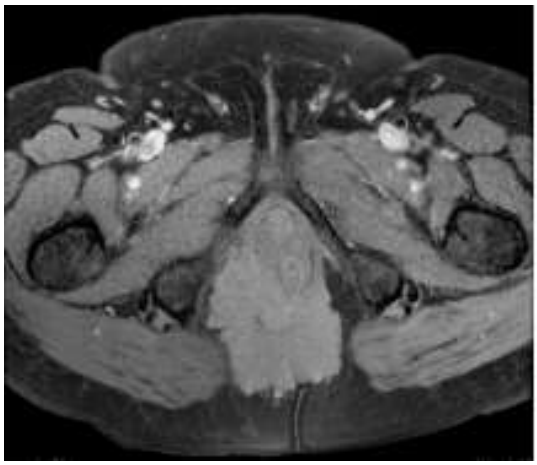

Fig.3 *An axial T1-weighted MRI with fat suppression technique shows an iso to slight hypersignal mass.*

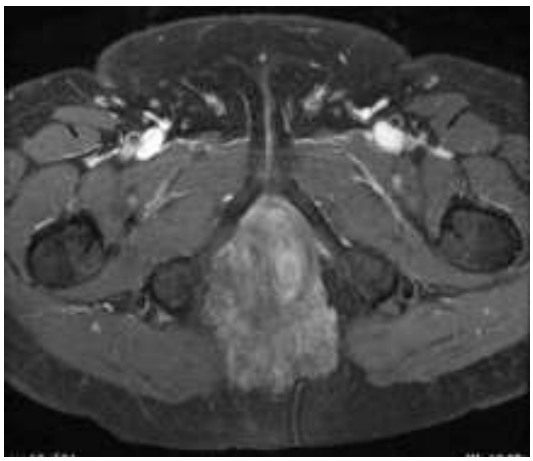

Fig.4 *Post contrasted axial T1-weighted MRI with suppression technique shows enhanced solid components and meshlike internal enhancement.*

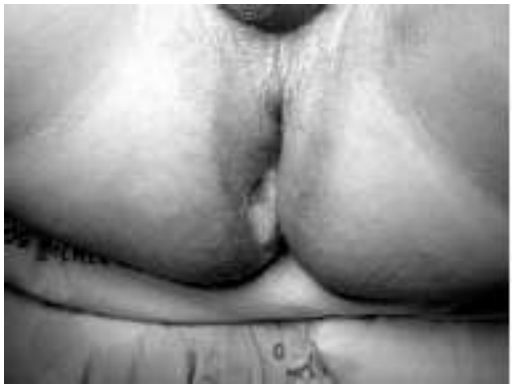

Fig.5 *The patient on lithotomy position with a perineal-drained wound*

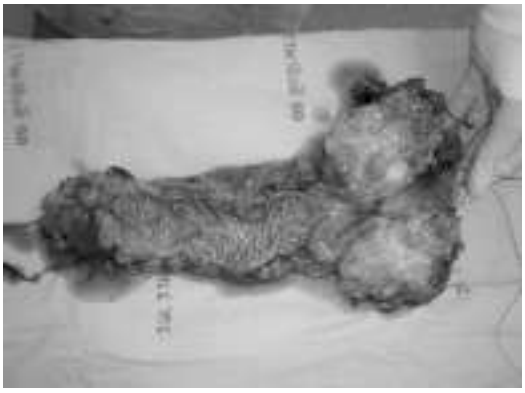

Fig.6 *A specimen from abdominoperineal resection shows perianal mass*

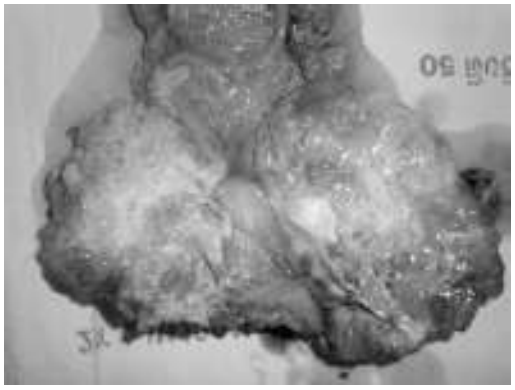

Fig.7 *Perianal mass with multi-septate filled with mucoid material*

Fig.8 *A low- power, microscopic finding with H&E stain showes mucinous adenocarcinoma within the submucosal layer and no mucosal involvment*

Table 1 Reported cases of perianal mucinous adenocarcinoma associated with long-standing fistula in ano

Reference	age	Duration of fistula (years)	Diagnostic method	Treatment	Follow up (months)	outcome
Yang[13]	52	15	MRI + biopsy	chemo+RT	28	tumor progress
	59	3	MRI + biopsy	chemo+RT	24	alive
	61	12	MRI + biopsy	no treatment	6	died
Papapolychroniadis[15]	81	20	CT+MRI+biopsy	wide excison	12	disease free
Venclauskas[16]	70	15	CT+TRUS+biopsy	APR	loss follow up	-
Ong[17]	64	30	CT+MRI+biopsy	APR	13	disease free
	44	3	CT+biopsy	APR+ adj chemo	15	died
	69	30	CT+biopsy	APR	40	disease free
	48	5	CT+biopsy	APR	39	disease free
Sato[6]	67	37	CT+biopsy	APR+ adj chemo	54	died
Okada[3]	63	unknown	CT+biopsy+ cytology	APR+ adj chemo+RT	24	disease free
Sierra[18]	37	16	CT+biopsy	chemo+RT subsequent APR	NR	NR
Getz[11]	54	6	biopsy	APR	NR	NR
	51	28	biopsy	APR	NR	NR
Erhan[19]	77	30	CT+biopsy	APR	> 24	disease free
Anthony[20]	68	unknown	biopsy	none	2	died
	74	unknown	biopsy	RT+ subsequent APR	48	died
	61	unknown	biopsy	chemo+RT subsequent APR	12	alive
	50	20	biopsy	chemo+RT	14	died
Leal[22]	68	18	MRI+biopsy	APR	NR	NR
Schwartz[2]	39	> 1	biopsy	APR	NR	NR
Taniguchi[10]	62	20	biopsy	APR	72	disease free
Welch[23]	56	14	biopsy	APR	NR	NR

Note: All patients in these reports were male; adj = adjuvant, APR = abdominoperineal resection, chemo = chemotherapy, CT = computerized tomography, MRI = magnetic resonance imaging, NR = not reported, RT = radiotherapy, TRUS = transrectal ultrasound

glands and fistulous tract lining)[4]. Usually, the extramucosal or perianal adenocarcinoma, developing in preexisting fistula are mucinous in type[4]. Rosser[5] first established a diagnostic criteria for adenocarcinoma originating from the anal-fistula: 1) the fistula should usually antedate the carcinoma by at least 10 years, 2) the only tumor present in the rectum or anal canal should be secondary to direct extension from the carcinoma in the fistula and 3) the internal opening of the fistula should be into the anal canal and not into the tumor itself. However, it may be difficult to identify the precise origin of these tumors, because of the extensive spreading at the time of presentation[6]. The pathogenesis of this disease is still controversial and the data is limited. The arising of perianal mucinous adenocarcinoma associated with chronic fistula in ano may be secondary to 1) chronic inflammation and irritation[7,8] 2) the fistulous tracts that are congenital duplications of the lower third of the hind gut lined by rectal mucosa and prone to malignant change[9]. 3) migration of the rectal adenocarcinoma into anal fistula.[10] 4) chronic scarring in which lymphatics are disrupted and immunological surveillance against developing metaplastic or frankly neoplastic cells is impaired[11].There are many reports about chronic anal fistulae associated with Crohn's disease may be complicated by anal carcinoma.[12-14]

Case reports of perianal mucinous adenocarcinoma are summarized in table 1[2,3,6,10,11,13,15-22] All of the patients in these reviews were male. Most patients were older than 50 years. They suffered with long-standing chronic fistula in ano. Most of these had been presented more than 10 years before the mucinous adenocarcinoma was diagnosed. In general, symptoms of bleeding or obstruction are rarely present because of it's extramucosal origination and the slow growth of the tumor. These make early diagnosis difficult[13,23]. Imaging is necessary for assessing staging and accurate diagnosis. CT scan of the whole abdomen and pelvis are needed whereas MRI of the pelvis and buttock is very helpful in assessing the presence of sphincteric invasion and of surrounding structures[17]. MRI accurately shows anatomy of the anal canal and helps to diagnose mucinous adenocarcinoma[21]. The majority of mucinous adenocarcinoma typically show low-signal intensity on T1-weighted and a markedly high-signal intensity on T2-weighted MR images[24]. The high signal of T2-weighted image is more likely a result of their unique histopathologic composition than of the presence of the necrosis[25]. Other characteristic on MRI are enhanced solid components, meshlike internal enhancement and finding fistula between the mass and the anus[3,24,26]. A colonoscopy should be performed for assessing the mucosa and synchronus lesion. The endorectal ultrasound may be helpful for locoregional staging as it is when used with rectal cancer patients.[17]

Carcinoembryonic antigen (CEA) was used in preoperative evaluation and was normal in our case. CEA may be elevated in lymph node or distant metastatic disease[13,17]. Preoperative histopathological study is important to confirm diagnosis, but may miss malignant lesions if using needle biopsy. Okada et al[3] use the cytologic study obtaining from mucin to diagnose before surgery in some of their cases, but most authors in the reviewed literature still use incision or excision biopsy. The biopsy specimen should be done in chronic fistula in ano cases in a manner of big biopsy or including the fistula tract and tissue around it, to prevent a faulty diagnosis[18,22].

Immunohistochemical studies were done in this case, reporting positive for CK 7 and CK 20. This finding is commonly found in anal canal adenocarcinoma and distinct from rectal-type adenocarcinoma that typically show CK7 - / CK 20 +[27,28].

At present, there is no standard guideline for the treatment of perianal mucinous adenocarcinoma. The recommendations for treatment and data on survival must be extrapolated from those made for

adenocarcinoma in general[17]. Most authors gave treatment of it as low rectal cancer with wide excision of the tumor with abdominoperineal resection[2,3,6, 10,11,16-22,29].

Klas et al.[28] reported survival and recurrence rates of the adenocarcinoma of anal canal patients at 5 years of 63% and 21%, respectively; the survival rate was related to a relatively small tumor (in 78% of cases, <5 cm) and the use of chemoradiotherapy either preoperatively or postoperatively for larger tumours (>5 cm).

Sierra[18] and Anthony[20] reported the benefit of preoperative chemo and radiotherapy for down sizing perianal mucinous adenocarcinoma tumor and then performed subsequent abdominoperineal resection. Recent studies have shown the benefit of the pre and post operative chemoradiotherapy.[29] However there is no good decided study in the present.

Conclusion

Perianal mucinous adenocarcinoma associated chronic fistula in ano is a rare disease. Early diagnosis is difficult and need high index of suspicion. MRI is a very helpful tool for diagnosis and clearly shows the extension of the disease. Abdominoperineal resection with wide excision of the tumor is the treatment of choice for the operable patient in most studies. Pre and post operative chemoradiotherapy may be preferred in selected cases but further studies are necessary for this regimen to be employed as a standard in the future.

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Case Report/รายงานผู้ป่วย

มะเร็งบริเวณรอบทวารหนักชนิด mucinous adenocarcinoma ที่เกิดร่วมกับ fistula in ano

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บทคัดย่อ

โรคมะเร็งบริเวณรอบทวารหนักชนิด mucinous adenocarcinoma ที่เกิดร่วมกับ fistula in ano เป็นโรคที่พบได้น้อยมาก อีกทั้งยังยากต่อการวินิจฉัยโรคที่เกิดในระยะเริ่มแรก ปัจจุบันยังไม่มีการรักษาที่เป็นมาตรฐาน จากรายงานส่วนใหญ่ การรักษาจะมีแนวโน้มที่คล้ายกับโรคมะเร็งลำไส้ตรงส่วนล่าง ผู้นิพนธ์ได้รายงานลักษณะอาการแสดงและการรักษาผู้ป่วยหนึ่งรายที่มาด้วย chronic fistula in ano และต่อมาภายหลังได้รับการวินิจฉัยว่าเป็นมะเร็งชนิด mucinous adenocarcinoma จาก MRI และ biopsy

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