Case Report

Granular cell tumor of colon: a case report

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ABSTRACT: Granular cell tumor rarely affects the gastrointestinal tract. The symptoms are often unspecific and the diagnosis is reached accidentally by colonoscopy. We report the case of a 42-year-old patient diagnosed with granular cell carcinoma of the colon based on an incidental finding in colonoscopy, who was treated successfully by endoscopic excision of the tumor.

Keywords: colon; colonoscopy; granular cell tumor; endoscopy.

RESUMO: O tumor de células granulares raramente acomete o trato gastrointestinal. Os sintomas muitas vezes são inespecíficos e o diagnóstico é feito ao acaso através da colonoscopia. Nós reportamos o caso de um paciente de 42 anos diagnosticado com tumor de células granulares de cólon devido a um achado incidental da colonoscopia e tratado com sucesso com remoção endoscópica.

Palavras-chave: colo; colonoscopia; tumor de células granulares; endoscopia.

INTRODUCTION

Granular cell tumor, also known as granular cell myoblastoma[1], is a rare soft tissue tumor that affects any anatomical site, more commonly the oral cavity and tongue (33%), subcutaneous tissues (10%) and the musculoskeletal system (5%)[2,3]. In the gastrointestinal tract, it affects most commonly the esophagus, followed by the stomach and duodenum[2]. Its histogenesis is uncertain[3]; however, it is known to be a benign tumor that appears as a submucosal nodule, and which may be accidentally found during the endoscopic exam[4].

We report the case of a patient with granular cell tumor, diagnosed and treated by endoscopy, with good progress after 24-month follow-up.

CASE REPORT

A 42-year-old man came to the outpatient clinic complaining of rectal prolapse, bleeding and pain at evacuation. At the physical examination, mixed hemorrhoids were observed, with no additional findings. In the preoperative period, laboratorial exams were performed and the patient was submitted to colonoscopy.

This examination showed the presence of three submucosal lesions in the cecum and ascending colon, which were resected after infiltration of the submucosa with saline solution, with no complication during the procedure. Macroscopically, the lesions presented around 5 mm diameter, were hardened and whitish. The material was sent for histopathological analysis, which showed lesions compatible with granular cell

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tumor, presenting dystrophic calcifications (Figure 1). The lesions were removed by endoscopic excision, with observational management. After 24-month follow-up, the patient remains asymptomatic and with normal colonoscopy.

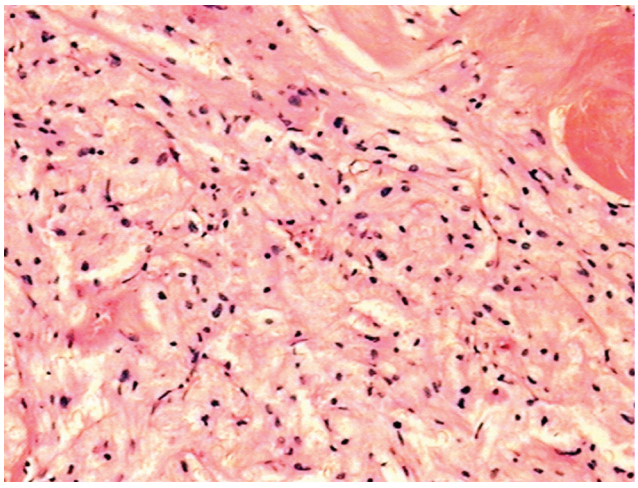

Figure 1. *Histological exam showing dystrophic calcifications, compatible with the presence of granular cell tumor.*

DISCUSSION

Granular cell tumor rarely affects the gastrointestinal tract. The cellular origin of this entity is uncertain. In the beginning, it was believed to have a myoblastic origin, and for this reason, it was named granular cell myoblastoma. However, as it is positive to S-100 protein, it is thought to be a tumor of neural origin, more precisely, of Schwann cells[5]. The incidence of this neoplasm has not been defined, but it is supposed to affect more often men in his 40s or 50s[2].

When affecting the gastrointestinal tract, this tumor is usually located in the submucosa, covered by normal mucosa[6]. The tumor diameter varies from 1 to 2 cm, but tumors of 4 cm diameter have been reported, and it may be a single tumor or multiple tumors.

The tumor symptoms are unspecific. In most cases, the lesions are asymptomatic; and they may simulate other pathologies that affect the colon, such as hematochezia and abdominal discomfort[1,7]. At colonoscopy, the aspect is similar to that of a sessile polyp, preferably located in the anorectal area and the ascending colon[4]. The endoscopic biopsy is not the best option, as in most cases, the tumor is covered by normal mucosa. The endoscopic ultrasound may suggest the diagnosis, but it does not always allow it to be distinguished from malign neoplasms[8]. The best diagnostic option is the mass surgical excision and histopathological analysis[7].

Diagnosis is rarely difficult at the histopathological analysis, as the presence of nests of large cells with abundant cytoplasm and small and round nucleus is typical. The immunohistochemical analysis confirms the diagnosis when demonstrating positivity to S-100 protein, neuron specific enolasis and vimentin, and negativity to alpha smooth muscle actin and desmin[1].

As this is a benign pathology, the recommended treatment is the endoscopic excision of the lesion by extensive biopsy when the tumor diameter is smaller than 2 cm and not adherent to the muscularis propria, preventing complications such as perforation and bleeding[6]. In cases of multiple tumors, total colostomy is recommended. For single location of the tumor, but with diameter above 4 cm, colectomy is suggested, as tumors of this size present higher risk of malignity and metastasis[4].

CONCLUSION

This report described a case of granular cell tumors in the ascending colon and cecum. The patient presented unspecific symptoms, which is typical of this pathology, and the disease was accidentally diagnosed during colonoscopy. The endoscopic excision is the recommended treatment and was successfully performed in the patient, with good clinical progress after 24-month follow-up.

REFERENCES

1. Yamada T, Fujiwara Y, Sasatomi E, Nakano S, Tokunaga O. Granular cell tumor in the ascending colon. Intern Med 1995;34(7):657-60.
2. Sohn DK, Choi HS, Chang YS, Huh JM, Kim DH, Kim DY, et al. Granular cell tumor of colon: report of a case and review of literature. World J Gastroenterol 2004;10(16):2452-4.
3. Corman M. Colon and rectal surgery. 5th ed. Philadelphia: Lippincott Williams & Wilkins; 2005. p. 1089-1170: Less common

tumors and tumor-like lesions of colon, rectum and anus.
4. Santoni BALM, Pinto FES, Machado L, Ferraz ED, Cueto GG, Quintas CM, et al. Tumor de células granulares no canal anal: relato de caso e revisão de literatura. Rev Bras Coloproct 2006;26(4):454-8.
5. Berry MA. Granular cell tumor of the colon. Am J Gastroenterol 1995;90(4):684-5.
6. Yasuda I, Tomita E, Nagura K, Nishigaki Y, Yamada O, Kachi H. Endoscopic removal of granular cell tumors. Gastrointest Endosc 1995;41(2):163-7.
7. Ebecken R, Ebecken K, Motta RN, Basilio CA. Multiple colonic granular cell tumors. Gastrointest Endosc 2002;55(6):718.
8. Hwang JH, Saunders MD, Rulyak SJ, Shaw S, Nietsch H, Kimmey MB. A prospective study comparing endoscopy and EUS in the evaluation of GI subepithelial masses. Gastrointest Endosc 2005;62(2):202-8.

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