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Inherited thrombophilia in a patient with a colorectal carcinoma-a case report

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SUMMARY

Buccal Bifurcation Cyst (BBC) is a rare inflammatory odontogenic cyst that typically occurs at the buccal region of the first or second mandibular molars in younger patients. We report a rare case, of buccal bifurcation cyst mimicking a periodontal abscess in a 13-year-old female who complained of pus discharge from the right mandibular first molar region and was irresponsive to periodontal therapy. Treatment was done by simple enucleation without extraction of teeth. The patient has been under follow-up for about 2 years showing the normal bone repair. Although the BBC is uncommon, it is important for clinicians to recognize this entity, which will aid in early diagnosis and proper patient management.

Key words: congenital thrombophilia, thrombotic complications, venous thromboembolism, colorectal cancer

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INTRODUCTION

Venous thromboembolism (VTE) is a serious clinical problem. Malignancies are a common cause of VTE and at the same time, venous thrombosis has a role in the pathogenesis of cancer. The incidence of VTE in cancer patients is 4-6 times higher than in the general population. Approximately 20% of all VTE cases occur in cancer patients. VTE is the second most common cause of death in cancer patients. Tumor incidence is highest in the first 6 months after VTE diagnosis. Approximately 40% of VTE patients have metastasis at the time of diagnosis of the tumor. Cancer patients with VTE have a worse prognosis than those with malignancy alone. The pathophysiology of the hypercoagulable state and VTE is multifactorial, depending on the type of tumor, its size, localization, growth, stage of cancer, the condition and interaction of tissues and organ systems with malignancy. Risk factors for VTE in cancer patients include, but are not limited to, active disease and the presence of metastases [1-3]. The most important risk factors for thromboembolic disease are congenital and acquired thrombophilia. Factors such as immobility, surgical treatment, central venous catheter or bulky disease increase the risk of thromboembolism (Table 1).

CASE REPORT

We report 48 years old men with a history of right knee surgery followed by a deep venous thrombosis as thirty years old. The patient works in administration, is hypersthenic and an occasional smoker. In family history, there is a presence of fatal myocardial infarction (father). The second manifestation of thromboembolism was when he was forty-two years old. He was sent for examination to an angiologist for gradual pain in the right leg area, which last 2 days of moderate intensity in quiet. He had the swelling on the right side of the ankle which was permanent even with compression therapy and has not changed. Varix in the leg at the back is accentuated and sensitive to palpation. Duplex ultrasonography shows the varicoflebitis in the anterior system, a deep venous system on the forefoot and on the thigh without signs of thrombosis. D dimer was positive. He initiated the treatment with low molecular weight heparin (LMWH) anticoagulant after he had relief of symptoms. After a month, he continues with the regimen measures, with a compression bandage.

We realized oncomarker sampling and genetic examination of thrombophilic conditions. Onco markers are negative, congenital thrombophilic status is confirmed: homozygous factor V Leiden and homozygous MTHFR C677T. 3 months later, the patient was on a trip and he had severe dyspnoea and chest pain

Tab. 1. Classification of thrombophilia

1. Primary/inherited-Genetically determined propensity for thrombosis	
Common	Factor V Leiden (1691A)
	Prothrombín 20210A (FII20210)
Less common	Deficiency of antithrombin III
	Deficiency of protein C
	Deficiency of proteins S
Rare	Dysfibrinogenemia
2. Secondary/Acquired-Factors or conditions present as external stimuli that disrupt the hemostatic balance are present	
a. Other diseases (arterial hypertension, diabetes mellitus, atherosclerosis, hepatopathy, tumors, inflammation, sepsis, nephrotic syndrome)	
b. Physiological conditions (pregnancy, puerperium)	
c. Medicines (oral contraceptives, cytostatics)	

which was retrosternally localized. On EKG we register right ventricular overload-possible posterior myocardial infarction or pulmonary embolism. CT pulmoangiographic examination did not confirm embolization into the pulmonary artery. We confirm subacute acute myocardial infarction inferoposterior, he undergoes percutaneous transluminal angioplasty, on the coronary artery and stays on antiplatelet and hypolipidemic therapy. He is on cardiology and angiology dispensary. When he was 47 years old, seventeen years after the first manifestation of a thrombotic event, he was hospitalized for eneterorrhage (during treatment with acid acetylsalicylic). Haemoglobin, platelets and coagulation parameters are in the normal range. When the colonoscopy realized, there was a finding of tumor about 30 cm from the anus-histologically moderately differentiated adenocarcinoma, grade II. After initial staging CT, which was negative for distant metastases indicated sigma resection. Laparoscopic low anterior rectal and sigma resection, a post-operative prophylactic dose of LMWH. Five days after being released from the hospital, re-hospitalized for enterorrhage, development of ischemic colitis and abscess in the small pelvis. He passed a surgical descendentomy, resection of colon sigomideum propter colitis ischaemica, toilette cavi abdominis, resectioomenti majus, drainage, initiated full anticoagulant treatment. After surgery he was clinically stable, patient one week after second surgery released to home care. After consolidation he was sent to an oncologist, from definitive histology, it is moderately differentiated (grade II) adenocarcinoma of the colon rectosigmoideum penetrating into the muscularis proria, with 3 metastasis to regional lymph nodes (10 examined). pT2, pN1M0. CT staging: no evidence of locoregional recurrence of the underlying disease, no secondary focal changes. He was planned to undergo post-operative capecitabine treatment-6 cycles for risk parameters (lymph nodes, age, high proliferation index)-patient refused infusional chemotherapy. During the second and third cycle of chemotherapy, he had worsening of phlebitis on the right leg, significant reduction of mobility. Treated with LMWH and antibiotics. He refused the fourth cycle because of intolerance. After three months he had a CT examination, which is negative in terms of dissemination or local recurrence, colonoscopy is negative. Oncomarkers are negative. We continue dispensary care.

DISCUSSION

The incidence of thrombotic complications in patients with malignancy is higher than in the general population. There is little data on the association of congenital thrombophilia with malignant disease. Most of the publications are small and the results are limited to geographic variability, tumor type, stage, and treatment. Some suggest the association of mutation of factor V Leiden and the prothrombin G20210A with pathogenesis of malignancy. There is also an association with thromboembolic disease and MTHFR C677T mutation. The issue of screening for congenital thrombophilia is for the moment unresolved as well as the possible thromboprophylactic approach in these patients [4]. Battiselli et al., on a sample of 121 gastric cancer patients, suggests that the risk factors for thrombophilia are based on acquired base rather than on the genetic background. The prothrombin mutation G20210A does not appear to be a cofactor in the pathogenesis of gastric cancer [5]. Curigliano et al. analyzed the effect of prothrombotic factor V Leiden and prothrombin mutation G20210A on the development of deep venous thrombosis associated with a central venous catheter in patients with locally advanced or metastatic breast cancer. A cohort of 300 patients demonstrated a high risk of catheter-associated deep venous thrombosis in these patients with factor V Leiden chemotherapy [6]. Ingrid Pabinger et al. presented at the American Society of Hematology/ASH/ annual meeting 2012 poster, where a study of over 900 patients showed the association of factor V Leiden with the risk of developing TECH in patients with malignancy, especially in patients with newly diagnosed malignancy [7]. Association in the pathogenesis of prostate carcinoma, lung carcinoma, and oral carcinoma with congenital thromboembolism polymorphisms has not been demonstrated [8-10].

Although there is little data on the association of congenital thrombophilia with malignant disease, in clinical practice, there is a need for cancer screening in patients with thromboembolic disease and undetected direct cause or congenital thrombophilic status. In our patient, cancer screening did not play its role at the time of the first manifestation of thromboembolism, as cancer was diagnosed seventeen years after the first manifestation. Thus, the question of widespread screening (here for colorectal carcinoma) is difficult to implement (false positivity of the test for occult bleeding). Individual small sets point to the possibility of linking thromboembolic disease with factor V Leiden mutation and prothrombin G20210A mutation in patients with malignancy. There is also an association with thromboembolic disease and MTHFR C677T mutation. The issue of screening for a congenital thrombophilic condition in newly diagnosed malignancy is as yet unresolved as well as the possible thromboprophylactic approach in these patients [4]. Our case report does not show a typical patient, we show a rare coincidence of two entities. Even we suppose this coincidence is rare, there is a need to think about this possibility in clinical practice to identify patients at risk even in the condition of inherited thrombophilia.

CONCLUSION

There is a need to have more data on which patients would benefit from the type of malignancy search, and especially to determine when to look for it. But we may not be able to answer this question in the near future, so we now have to focus on clinical experience and think about the possibility of cancer in patients with congenital thrombophilia. In case of any suspicion, the adequate investigation is needed to detect the early stage of the disease.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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