

Case Report

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ERYTHEMA GYRATUM REPENS A RARE PARANEOPLASTIC RASH ASSOCIATED WITH GASTRIC ADENOCARCINOMA

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Internal malignancies can have non-specific cutaneous damage, such related to the cancer skin manifestations are called paraneoplastic. The reported frequency of paraneoplastic syndromes ranges from 5-15% to 2-20% of malignancies (1,8,10). Skin, as a multifunctional organ, engaged in a close relationship of the organism with the external environment, is highly sensitive to various pathological disorders, including systemic tumoral process. As a rule, paraneoplastic dermatoses occur before or simultaneously with the development of malignant tumors, often disappear after removal of tumors and appear again within relapses and metastases. Such dermatoses may be defined as hormonal, neurological or hematological disturbances and as clinical and biochemical imbalances associated with the presence of malignancies without direct association with primary tumor invasion or metastasis. Cutaneous paraneoplastic syndromes represent the diverse dermatological entities that signal the presence of a remote malignancy, they often are associated with malignant tumors of internal organs, sometimes may precede them in their clinical manifestations and give remission after successful therapy of a malignancy. In dermatology, there are some paraneoplastic diseases which fulfill the function of markers for the early detection of a malignant tumor or its possible recurrence. In some cases, paraneoplastic syndrome even gives a possibility to set a specific diagnosis of the underlying tumor. The development of paraneoplasia often is related to biologically active substances of polypeptide hormones, growth factors, produced by the tumor metabolites, and induced by tumor immunological disorders. Paraneoplastic skin changes vary in prevalence, epidemiology, clinical features, etc. but their main clinical characteristics are:

- 1) Simultaneous or near-simultaneous development of skin lesions and malignant tumor;
- 2) Statistical reliability of correlation of both processes;
- 3) the disappearance of benign skin lesions after surgical removal of tumors or after successful chemotherapy, radiation treatment;
- 4) the resumption of dermatosis in the case of recurrence or metastasis of the primary tumor (2). They resemble fairly well-known skin disease, but always have some distinctions either of clinical picture or response to systemic therapy that creates a number of diagnostic problems. The presence of such features in patients should always cause suspicion of cancer. One of such syndromes is erythema gyratum repens, first described by Gammel in 1952, a rare finding, described as rapidly migrating figurate or annular erythema composed of

concentric rings. Erythema gyratum repens is a rare, clinically specific paraneoplastic syndrome which in 82% of patients is associated with internal malignancy. The eruption can precede, occur concurrently, or appear after the diagnosis of the neoplasm. It is present an average of 9 months prior to the diagnosis of malignancy, with a range of 1-72 months (7). All cases have been described in Caucasians (4), males are affected twice as commonly as females, mainly in the age after 60. Most commonly it is associated with bronchial, esophageal, lung and breast cancer. The pathophysiology of this syndrome is unknown, but an immune response is postulated.

Purpose of the study: description of the case of erythema gyratum repens associated with gastric adenocarcinoma

Case report: male, 67 years old, retired, was consulted complaining of a erythematous eruption appeared 4 months ago firstly forming concentric rings on the dorsal part of both hand, forearms and spreading gradually to cover also shoulders and upper part of the chest. The eruption was asymptomatic, only sometimes there was light itching which became stronger during last weeks. The clinical examination revealed well-appearing erythematous plaques arranged in concentric rings or garlands with a tendency to peripheral growth, some of plaques had the raised edge and white scaled borders. The face, acral surfaces, oral mucosa and genital area were free from eruption. The diagnosis was erythema gyratum repens and a search was initiated for an underlying malignancy.



Fig.1 Elements of eruption on the shoulders

In accordance to anamnesis during the last few months he noted also night sweats, decreased appetite and sometimes pain in epigastric area. He did not observe weigh loss or any other symptoms. Among the previous diseases, he noted only respiratory viral infection and arterial pressure for which he regularly took prescribed medications. He was tested for possible underlying malignancy. At the moment of examination general condition was satisfactory, temperature 36.0°C, pulse of 79 beats/minute, respiratory rate of 18 breath/minute, blood pressure 140/90 mm Hg. Usual laboratory investigations showed that biochemical indexes of blood were within the normal range, general blood test showed the signs of hypochromic anemia and eosinophilia, ESR -48 mm/h. Stool examination for occult blood was negative. Chest radiography and abdominal ultrasonography revealed no signs of

pathology. The patient was referred to gastroenterologist for consultation and endoscopy or/and computer diagnosing. Was provided the endogastroscopy with biopsy of noted pyloric thickening, following morphological diagnosis showed the high-grade carcinoma of the stomach. During computer diagnostic were fixed enlarged lymphatic nodes in the course of gastric, digestive and splenic arteries. Taking into consideration the clinical, laboratory, CT and morphological findings and dermatologic picture was accepted the diagnosis of erythema gyratum repens associated with gastric adenocarcinoma. The patient was referred to the oncologist in order to decide the issue of surgery and further treatment.

Discussion: Dermatologic signs and symptoms are common paraneoplastic manifestations of underlying malignancy. Erythema gyratum repens was described by Gammel in 1952 in the patient with breast cancer and from this time the majority of reported in literature cases are associated with different internal malignancy, between them the most common are bronchial carcinoma, esophageal and breast cancer, but in the literature were reported several cases associated with tuberculosis, bullous pemphigoid, hypereosinophilic syndrome (3, 6, 9). This paraneoplastic syndrome is one of the most distinctive cutaneous manifestations of solid tumors (5) and often precedes the diagnosis of cancer. The exact cause and pathogenesis of erythema gyratum repens which is rare even among the patients with cancer is controversial and poorly understood, in its development various immunologic mechanisms were implicated (5,7). Clinical picture of the lesions are rather typical consisting of erythematous concentric eruption with characteristic figurate, gyrate or annular shape and fast expansion involving large areas of the body. Erythema gyratum repens has no specific histological features and diagnosis is clinical, taking into consideration the differentiation of erythema migrans, erythema annulare centrifugum or necrolytic migratory erythema. There are no uniform recommendations for treating these lesions, though it is believed that they will respond to management of the underlying condition. After the proper treatment of the tumor erythema will start to resolve or in the case of grave metastatic load will not disappear.

Conclusion: erythema gyratum repens is a rare facultative cutaneous paraneoplasia and its initial symptoms are often developed before clinical picture of cancer. In the majority cases of paraneoplastic dermatoses the patient applies first to dermatologist, who later refers him to the other specialist for examination or surgery. That's why dermatologists must be trained properly to consider the possibilities of internal disease in all cases of recurrent, atypical or bizarre dermatoses and must be able to suspect fatal pathology before laboratory or instrumental confirmation of underlying malignancies. Patients with this dermatosis should be considered as having malignancy and should be mandatorily evaluated.

Key words: paraneoplastic diseases, erythema gyratum repens, gastric adenocarcinoma

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შემთხვევის აღწერა

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Erythema gyratum repens - იშვიათი პარანეოპლასტიკური დერმატოზი, ასოცირებული კუჭის ადენოკარცინომასთან

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Erythema gyratum repens არის იშვიათი პარანეოპლასტიკური დერმატოზი, რომლისთვისაც დამახასიათებელია გირლიანდად ან კონცენტრირებულ რგოლებად დალაგებული ერთემატოზული ბალთები პერიფერიული ზრდის ტენდენციით და ასოცირებული არსებულ ავთვისებიან დაავადებასთან. უმრავლეს შემთხვევაში, erythema gyratum repens ასოცირდება სოლიდურ სიმსივნეებთან, უფრო ხშირად ფილტვებში, ბრონქებში, კუჭში, აგრეთვე ტუბერკულოზთან, ბულოზურ

პემფიგოიდთან, ჰიპერეოზინოფილურ სინდრომთან. ნაშრომში წარდგენილია შემთხვევა, როდესაც erythema gyratum repens ასოცირდება კუჭის ადენოკარცინომასთან ონკოლოგიური ანამნეზის გარეშე. პაციენტებს, რომელთაც აქვთ erythema gyratum აუცილებლად უნდა გაიარონ სადიაგნოსტიკო სკრინინგი ავთვისებიან დაავადებაზე, რადგან ეს დერმატოზი აგრესიული სიმსივნის მარკერია.