

Skin Findings of Patients Hospitalised in the Gastroenterology Department

Ezgi Aktas Karabay¹, Nihal Asli Kucukunal¹, Ilknur Kivanc Altunay¹, Asli Aksu Cerman¹, Canan Alkim²

ABSTRACT:

Skin findings of patients hospitalised in the gastroenterology department

Objective: The purpose of the study is to define the skin findings of gastroenterology inpatient clinic patients.

Material and Method: Patients who were under treatment in the Gastroenterology Department of our hospital between November 2012-April 2013 were included in the study. Patients' age, gender and disease information were recorded. All patients were examined by the same dermatologist.

Results: A total of 89 patients (37 (41.5%) female, 52 (58.4%) male) were included in the study. The mean age of the patients was 52.79 (20-85) years. The patients were followed up with the diagnosis of different gastrointestinal diseases, including inflammatory bowel diseases (33.7%), liver cirrhosis (33.7%), other hepatobiliary diseases (12.3%), malignancies (10.1%) and pancreatitis (8.9%). Dermatologic examination revealed that 36 patients (40.4%) had pigmentation disorders, 32 patients (35.9%) had xerosis cutis, 31 patients (34.8%) had bacterial and fungal infections and 21 (23.5%) had various nail changes. As specific skin findings; 1 (1.1%) patient with ulcerative colitis had psoriasis vulgaris, 1 (1.1%) patient with Crohn's disease had vitiligo, 1 (1.1%) patient with Kaposi's sarcoma had the nodules of the Kaposi's sarcoma in oral mucosa, 1 (1.1%) patient with liver cirrhosis had palmar erythema and 1 (1.1%) tuberculous peritonitis had erythema nodosum.

Conclusion: In our study we defined a small number of specific skin findings of gastrointestinal diseases.

Keywords: Gastroenterology, inflammatory bowel disease, liver cirrhosis, skin

ÖZET:

Gastroenteroloji Kliniği'nde yatan hastalarda izlenen deri bulguları

Amaç: Bu çalışmada hastanemiz gastroenteroloji kliniğinde yatarak tedavi alan hastaların deri bulgularının tanımlanması amaçlanmıştır.

Gereç ve Yöntem: Hastanemiz Gastroenteroloji Kliniği'nde Kasım 2012-Nisan 2013 tarihleri arasında çeşitli tanımlar ile yatarak tedavi almakta olan hastalar çalışmaya dahil edildi. Tüm hastaların yaş, cinsiyet ve hastalıklarına ait bilgileri kaydedildi ve tüm hastaların aynı dermatolog tarafından tam deri muayeneleri yapıldı.

Bulgular: Çalışmamıza 37 (%41.5) kadın 52 (%58.4) erkek toplam 89 hasta dahil edildi. Hastaların yaş ortalaması 52.79 (20-85 yaş) idi. İnflamatuvar barsak hastalıkları (%33.7), karaciğer sirozu (n=30, %33.7), diğer hepatobiliyer sistem hastalıkları (n=11, %12.3), malignite (n=9, %10.1) ve pankreas bezi ile ilgili hastalıklar (n= 6, %8.9) başta olmak üzere çeşitli gastrointestinal sistem hastalıkları saptandı. Deri bulguları değerlendirildiğinde sırasıyla, 36 hastada (%40.4) pigmentasyon değişiklikleri, 32 hastada (%35.9) kserozis kutis, 31 hastada (%34.8) bakteriyel ve fungal enfeksiyonlar, 30 hastada (%33.7) androjenetik alopesi ve 21 hastada (%23.5) tırnak değişiklikleri izlendi. Spesifik deri bulguları olarak sırasıyla, 1 (%1.1) ülseratif kolit hastasında psoriasis vulgaris, 1 (%1.1) Crohn hastasında vitiligo, 1 (%1.1) Kaposi sarkomu tanılı hastada oral mukozada kaposi nodülleri, 1 (%1.1) karaciğer sirozu hastasında palmar eritem, 1 (%1.1) tüberküloz peritoniti tanısı olan hastada eritema nodosum mevcuttu.

Sonuç: Çalışmamızda gastrointestinal hastalıklara özgü az sayıda deri bulgusu saptandı.

Anahtar kelimeler: Gastroenteroloji, inflamatuvar barsak hastalıkları, karaciğer sirozu, deri

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¹Sisli Hamidiye Etfal Training and Research Hospital, Department of Skin and Venereal Diseases, Istanbul - Turkey

²Sisli Hamidiye Etfal Training and Research Hospital, Department of Gastroenterology, Istanbul - Turkey

Address reprint requests to/ Yazışma Adresi: Ezgi Aktas Karabay, Sisli Hamidiye Etfal Training and Research Hospital, Department of Skin and Venereal Diseases, Istanbul - Turkey

E-mail / E-posta: ezgiii.aktas@gmail.com

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INTRODUCTION

Apart from primary skin diseases, many systemic diseases are also accompanied by skin involvement. Cutaneous lesions may be the primary findings of the systemic disease and may also develop secondary to the systemic disease (1-3). It is not uncommon to see skin findings in gastrointestinal system (GIS) diseases. In some GIS diseases accompanying skin findings may guide the diagnosis of the disease and provide information about the course of the disease (2,3). Skin findings may be one of the main features of the disease, as well as may occur with common pathological mechanisms, or as a complication to the agent used in the treatment (1-4).

In the literature, it has been seen that there are studies investigating the skin findings accompanying to some GIS diseases separately; especially the inflammatory bowel diseases (IBD); however, no study evaluating the skin findings of patients with different GIS diseases has been made (5-11). The aim

of our study is to determine the skin findings in patients who are under treatment in the gastroenterology inpatient clinic.

MATERIALS AND METHOD

The study included 89 patients who were hospitalized with various diagnoses at Sisli Hamidiye Etfal Training and Research Hospital Gastroenterology Clinic. The sociodemographic characteristics such as age, gender, and the information about the disease that caused hospitalization were recorded. A total body skin examination of the patients were performed by a dermatologist. Approval for the study was obtained from Ethics Committee of Sisli Hamidiye Etfal Training and Research Hospital. Informed consent form was obtained from each patient that participate in the study.

RESULTS

A total of 89 patients (37 (41.5%) female, 52

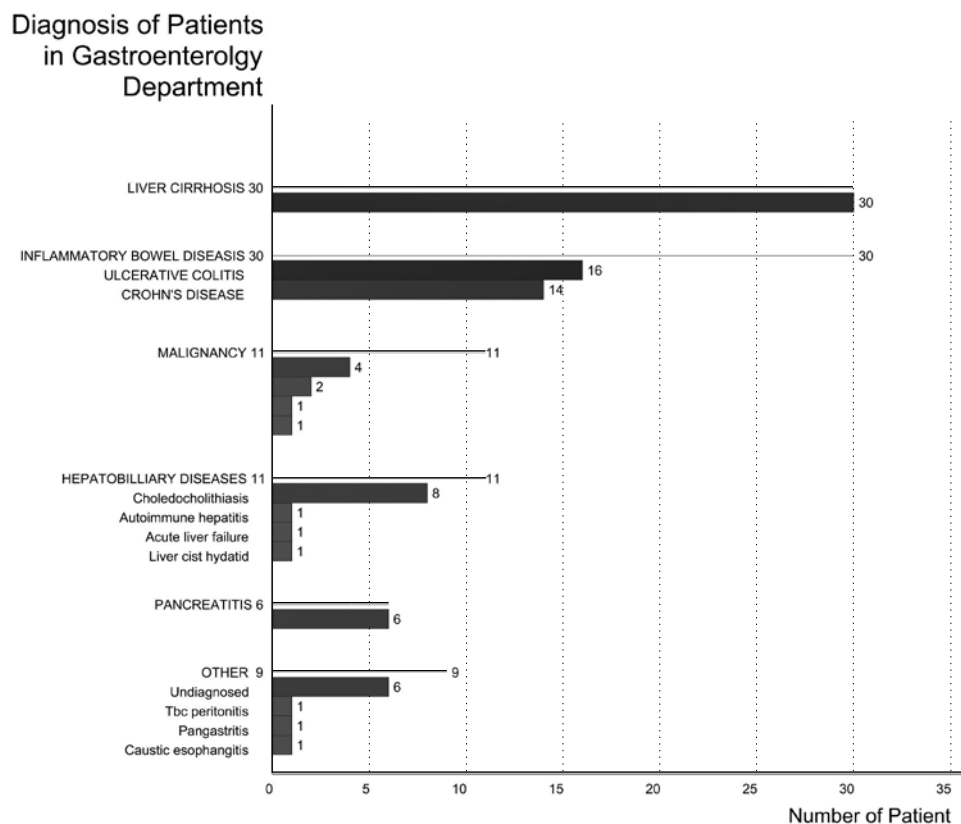


Figure-1: Diagnoses of the Patients in Gastroenterology Department

(58.4%) male) were included in the study. The mean age of the patients was 52.79 (20-85) years. The patients were followed up with the diagnosis of different gastrointestinal diseases, including

inflammatory bowel diseases (n=30, 33.7%), liver cirrhosis (n=30, 33.7%), other hepatobiliary diseases (n=11, 12.3%), malignancies (n=9, 10.1%) and pancreatitis (n=6, 8.9%). Ulcerative colitis (UC) was

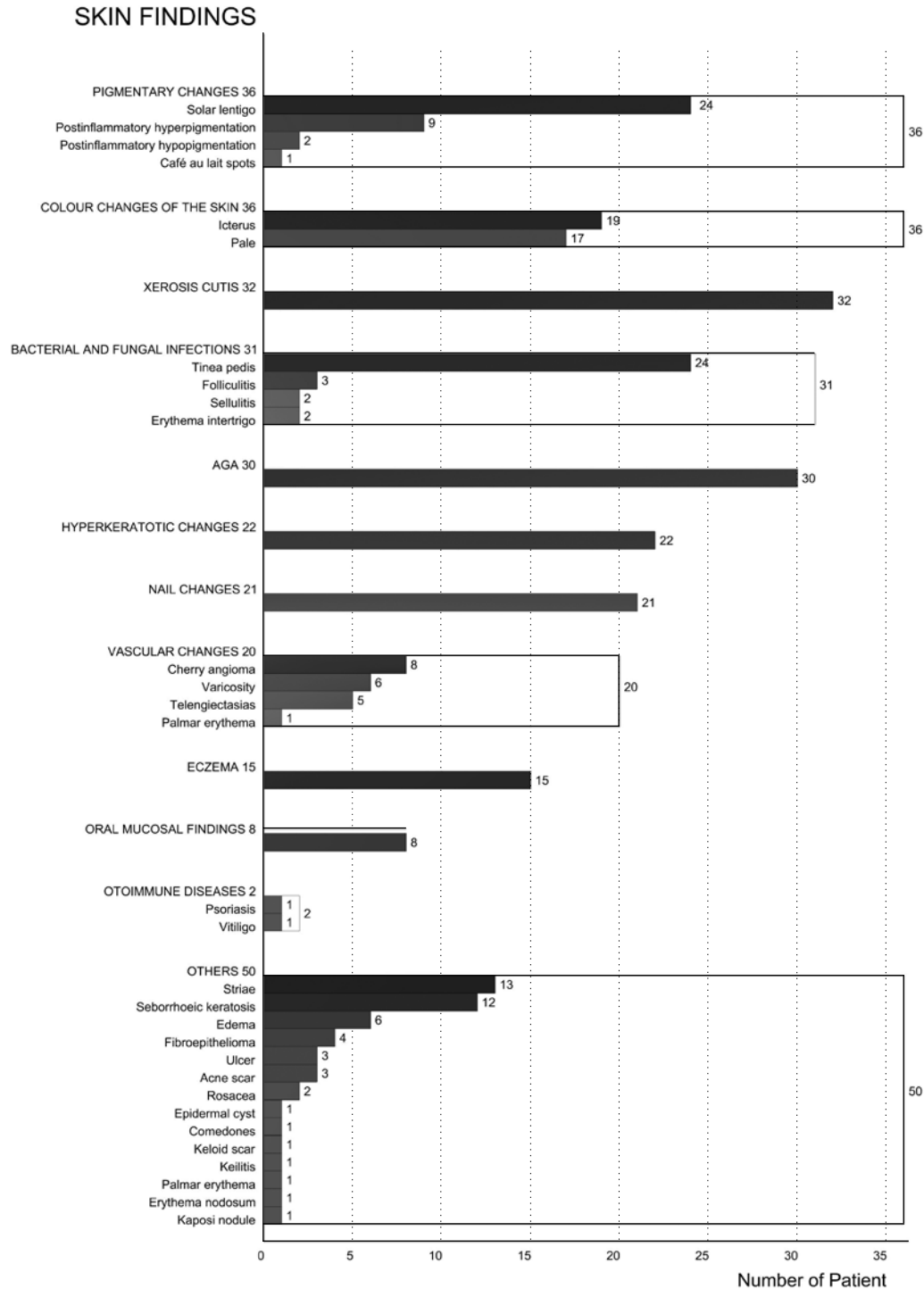


Figure-2: Skin Findings of the Patients

observed in 16, and Crohn's disease was observed in 14 of the patients with IBD. Eight of 11 patients with diagnosis of hepatobiliary system diseases had choledocholithiasis; in this group, 1 patient had autoimmune hepatitis, 1 patient had acute hepatic failure, 1 patient had hydatid cyst. Of 9 patients with malignancies, 4 had hepatocellular carcinoma, 2 had stomach carcinoma, 1 had pancreatic cancer, 1 had stomach Kaposi's sarcoma, and 1 had colon carcinoma diagnoses. The indications for the patients to be hospitalized in Gastroenterology Clinics are summarized in Figure-1.

Dermatologic examination revealed that 36 patients (40.4%) had pigmentation disorders, 32 patients (35.9%) had xerosis cutis, 31 patients (34.8%) had bacterial and fungal infections, 30 patients (33.7%) had androgenetic alopecia and 21 (23.5%) had various nail changes. Of the nail changes, 78.9% (n=15) was onychomycosis, 10.5% (n=2) was yellow discoloration, 10.5% (n=2) was vertical streaking, 5.2% (n=1) was posttraumatic hemorrhage and 5.2% (n=1) was posttraumatic dystrophic changes. In addition, 36 patients (40.4%) had skin color changes, 19 patients (21.3%) had generalized body pruritus. Twenty-two patients (24.7%) had hyperkeratotic changes, 15 (16.8%) had different types of eczematous diseases, 20 (22.4%) had various vascular proliferations and disorders. Eight (8.9%) patients had oral mucosal changes; oral ulcers were observed in 37.5% of these patients (n=3). All 3 patients with oral ulcers had Crohn's disease (21.4%). As specific skin findings; 1 (1.1%) patient with ulcerative colitis had psoriasis vulgaris, 1 (1.1%) patient with Crohn's disease had vitiligo, 1 (1.1%) patient with Kaposi's sarcoma had the nodules of the Kaposi's sarcoma in oral mucosa, 1 (1.1%) patient with liver cirrhosis had palmar erythema and 1 (1.1%) tuberculous peritonitis had erythema nodosum. The skin findings of the patient are summarized in Figure-2.

DISCUSSION

Skin findings of gastrointestinal diseases are classified as disease-specific and non-specific skin findings. Many etiological factors such as

autoimmunity, infective agents and metastasis are stated in the development of the skin manifestations in these diseases (6). Some skin findings may be diagnostic for the underlying GIS, hepatobiliary system and pancreatic disease, and may determine the follow-up and treatment (13).

Inflammatory bowel disease (IBD) is an idiopathic and inflammatory disease of the GI tract. The main 2 types are Crohn's disease and UC (10). IBD is seen in the 0.37% of the population (5,8). In our study, the most common disease in the hospitalized patients in gastroenterology clinic was IBD (33.7%). In the literature, skin findings have been reported in the one third of IBD patients. The skin involvement is more frequent and specific in Crohn's disease, than in UC (5). The skin findings in IBD can be classified as specific lesions such as fissures and fistulas, oral Crohn's disease, metastatic Crohn's disease; reactive lesions such as erythema nodosum, pyoderma gangrenosum, pyostomatitis vegetans; and chronic inflammation and autoimmunity-related psoriasis, vitiligo, reactive arthritis eczema, clubbing and acrodermatitis enteropathica (3). Erythema nodosum is found especially during the active periods of intestinal disease and joint disease; whereas pyoderma gangrenosum is a less common but more serious skin finding (8). While most of these findings were not detected in our study patients, oral mucosal ulcers were detected in 21.4% of patients with Crohn's disease. It is known that generally in patients with Crohn's disease, the oral mucosal ulcers are observed in 4-24%, parallel to the activation of the disease (10). Although the relationship between the oral ulcers and IBD is not clearly elucidated, it is thought that autoimmunity and a type of hypersensitivity to immunocomplexes beside malabsorption may be responsible (6,9,12). Psoriasis is the most common skin disease associated with IBD. The incidence of psoriasis, 1-2% in the general population, has been reported to be 7-11% in IBD patients (10,14). Genetic and immunological mechanisms are thought to lead to this association (12,15). Psoriasis is seen less common in UC patients, compared to patients with Crohn's disease (16). Psoriasis was diagnosed in 1 UC patient included in the study. There is no relationship between psoriasis

and the clinical activity of IBD. It is known that psoriasis often develops before IBD develops in patients with psoriasis and IBD diagnosis (17). In our patient, in comparison with the literature, psoriasis was diagnosed years before UC was diagnosed. We think that psoriasis patients should be followed up for IBD. The association of Crohn's disease and vitiligo have been reported in some case reports (18,19). This association is explained by the inhibition of suppressor T-cells leading cellular antimelanocytic activity in the active period of Crohn's disease (10-12). In the study of Snook et al. (20), vitiligo has been reported in 1.1% of patients with Crohn's disease, while in the study of McCallum and Kinmont (21) this rate was reported as 2.2%. In our study, vitiligo was present in 1 patient with Crohn's disease (7.1%).

Liver cirrhosis may be considered as the ultimate stage of chronic liver diseases due to various causes. At this stage (in the liver cirrhosis), the specific problems due to the etiology may lose its significance while the clinical problems of cirrhosis itself become decisive. Liver cirrhosis and other hepatobiliary diseases can be classified into subgroups such as infections, toxins, neoplasms, inflammatory diseases, metabolic diseases, vascular disorders that affect liver and biliary system, according to etiology. Specific skin findings may show differences according to etiology. The main specific skin findings accompanying to hepatobiliary diseases are pigmentary changes such as jaundice and melanosis, vascular changes such as spider angioma and palmar erythema, hormone-dependent skin changes, skin changes of the primary biliary cirrhosis, nail changes and pruritus (22). In our study, there were a total of 41 (46%) patients with diagnoses of liver cirrhosis, liver cyst hydatid, acute hepatic failure, autoimmune hepatitis, cholangitis and choledocholithiasis for hepatobiliary system disease. In 52.7% of these patients icteric skin color, and in 50% generalized pruritus were detected. Itching may be seen in all hepatocellular system disorders, mainly in diseases that cause cholestasis. Although the mechanism of development of pruritus in liver diseases is not clearly known, endogenous opioids are thought to play a role (32). Icterus occurs as a consequence of

accumulation of bilirubin or its metabolites in the skin or mucous membranes (33,34). In our study, severe palmar erythema was observed as a specific skin lesion in one liver cirrhosis case. In hepatic failures, palmar erythema is thought to be the result of inadequate estrogen metabolism (34).

Many skin lesions may develop due to malignancies of GIS. In GIS malignancies, direct infiltration of skin by cancer cells, lymphatic or hematogenous metastasis may be observed, as well as paraneoplastic skin lesions (23,24). Some specific skin lesions such as acanthosis nigricans, acrokeratosis paraneoplastica, Leser-Trélat Syndrome, Muir-Torre Syndrome, Paraneoplastic Dermatomyositis, Paraneoplastic Pemphigus, Peutz-Jeghers Syndrome may guide in GIS malignancies that have not yet been diagnosed (23). No skin lesions specific to malignancies have been detected in our study. In one patient in our study with Kaposi's sarcoma nodules detected in his stomach, Kaposi's sarcoma nodule has been detected in his oral mucosa. Kaposi's sarcoma is a low-grade vascular tumor associated with human herpes virus-8 infection. Gastrointestinal involvement is not uncommon in cutaneous Kaposi's sarcoma. While the incidence of GIS involvement in classical Kaposi's sarcoma has been reported as 10%, and as 40% in immune-suppressed individuals (25-27), this rate has been reported as 50-80% in AIDS patients with Kaposi's sarcoma (28-30). Even though the Kaposi nodules in the skin and GIS are often asymptomatic, they may rarely present as GIS bleeding, malabsorption, diarrhea, GIS obstruction (31). The patient with Kaposi's sarcoma in the study was diagnosed after the gastroscopy due to anemia and histopathological tissue examination.

Erythema nodosum is a form of panniculitis characterized by the placement of erythematous tender plaque and nodules, typically located on the lower extremities. It may develop idiopathically, but many infectious agents, especially streptococcal agents, drugs, pregnancy, oral contraceptive pills, enteropathies and malignancies are also etiological factors. Mycobacterium Tuberculosis infections are known for a long period of time to be responsible for the development of erythema nodosum (35-37). In

our study, the subcutaneous nodules at the lower extremities of a patient with tuberculous peritonitis whose tuberculin test was positive and diagnosis was confirmed with PCR were diagnosed as erythema nodosum clinically and histopathologically.

In GIS diseases, in addition to the impaired digestion and absorption, loss of appetite causes malnutrition. Dryness of skin and nonspecific eczema may be seen secondary to essential fatty acid deficiency (4,9). Xerosis cutis was present in 35.9% of the patients in our study, and 16.8% had eczema.

All therapeutic agents have risks of developing drug reactions in the skin. The drug eruptions may be maculopapular, lichenoid, bullous, psoriasis-like, as well as skin cancers, and increased skin infections may develop due to immunosuppressive agents used in the treatment. No skin finding was observed due to drugs used for treatment in our study (1).

Solar lentigo, seborrheic keratosis, hyperkeratosis, nail changes such as tinea pedis, onychomycosis, vertical striae, and skin findings such as striae, acne scars and fibroepithelioma, which are non-specific to the underlying GIS diseases were also observed in patients included in the study. However, we did not find any studies comparing the frequency of these skin findings in GIS patients and in healthy populations.

In our study, as a specific skin lesion in the IBD group, there were oral ulcers in three patients with Crohn's disease and psoriasis and vitiligo in one UC and in one Crohn's disease patients. The most common skin findings in the group with hepatobiliary system diseases were icteric skin color and pruritus, while palmar erythema was detected as a specific

skin finding in a patient with liver cirrhosis. As immunological mechanisms play role in the development of IBD the skin lesions in IBD were associated with auto-immunity; while in hepatobiliary diseases skin findings were secondary to liver metabolism changes. No skin lesion specific to malignities were detected in the patient group followed for GIS malignities. Only in one patient with Kaposi's sarcoma diagnosis, the kaposi nodules were observed in oral mucosa, in addition to the stomach. In one patient with tuberculosis peritonitis, erythema nodosum was seen secondary to the organism of tuberculosis. In patients included in the study, as a result of the malnutrition due to GIS diseases, xerosis cutis and eczema were also observed. These skin findings observed in GIS diseases, may be in a wide range depending on the etiology and pathophysiology of the primary disease. Autoimmunity, hypersensitivity reaction, hormonal changes due to metabolic changes, vascular changes, malnutrition, malignant cell infiltration, paraneoplastic syndromes play role in the development of these skin lesions.

Cutaneous lesions may precede the disease of GIS and in some cases may develop with the exacerbation of the GIS disease; thus skin findings may guide the physician during the follow-up and treatment of the disease. Cooperation of the gastroenterologist and the dermatologist may be helpful in early recognition of the skin findings of GIS diseases and may provide reducing the mortality and morbidity of the disease. We think that the low rate of specific skin findings in our study is due to the limitation of the number of patients. We believe that with larger study groups, skin findings specific to GIS diseases in our country may be detected.

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