A Rarely Seen Side Effect of Sulfasalazine: Yellowish Colour in Toenails

Ibrahim Tekeoğlu¹, Sinem Sağ¹*, Ayhan Kamanti¹, Mustafa Serdar Sağ¹ and Teoman Erdem²

¹Department of Physical Medicine and Rehabilitation, Rheumatology, Faculty of Medicine, Sakarya University, Sakarya, Turkey.
²Department of Dermatology, Faculty of Medicine, Sakarya University, Sakarya, Turkey.

Authors’ contributions

This work was carried out in collaboration between all authors. Authors SS and IT wrote the draft of the manuscript. Authors SS and MSS managed the literature searches. Authors IT and AK designed the figures, managed literature searches and contributed to the correction of the draft. Author TE provided the case, the figures and supervised the work. All authors read and approved the final manuscript.

ABSTRACT

Sulfasalazine (SLZ) was the slow acting medication most often used to treat patients with ankylosing spondylitis whose symptoms were not adequately controlled with nonsteroidal anti-inflammatory drugs, exercise, and rehabilitative therapies. Sulfasalazine is an older generation anti-rheumatic drug first synthesized in the 1940s as a combination of an antibiotic (sulfa pyridine) and a nonsteroidal anti-inflammatory drug (5-aminosalicylic acid). Most patients can take sulfasalazine with few side effects. In this study we present a rarely seen side effect of SLZ on a patient with ankylosing spondylitis whose toenails turned gradually yellow in two years duration.

Keywords: Ankylosing spondylitis; sulfasalazine; yellowish toenails.
1. INTRODUCTION

Ankylosing Spondylitis (AS) is characterized by inflammatory back pain, asymmetrical peripheral arthritis, enthesitis and extra-articular features [1]. SLZ which is one of the conventional Disease-Modifying Anti-Rheumatic Drugs (DMARDs) is commonly recommended for the treatment of peripheral spondyloarthropaty (pSpA); however, there is no evidence for the efficacy of this drug in the treatment of axial disease [2].

The most common side effects of SLZ are nausea and abdominal discomfort, which often occur in up to a third of patients early in the course of treatment.

Only about 10 percent of patients on this medicine will get a skin rash or headache. Even less commonly, patients taking this medication for rheumatoid arthritis will get mouth sores, itching or abnormalities of liver function [3].

Burning or skin damage from sunlight can also be a problem. Some people will develop orange colored urine, and even orange skin. This should not cause alarm. It is usually harmless and goes away after medication is stopped [3].

We aimed to present one of the rarest side effects of sulfasalazine in one of our patients, who has been diagnosed with AS and whose toenails started to turn yellow gradually on the second year of sulfasalazine treatment.

2. CASE

A 40-year-old female patient. She has a medical history of inflammatory lumbar pain and suspicious arthritis on her wrists for more than 3 years and a rheumatic medical history of inflammatory back pain on the lumbar and gluteal area for about 4 years. On her examination Mennel and Gaenslen sacroiliac compression tests for the right sacroiliac joint was positive. A Phase 3 sacroiliitis on the right was seen on the pelvis graph of the patient whose peripheral active arthritis couldn’t be identified. When an active sacroiliitis were seen on the right side in the sacroiliac MRI, and HLA B-27 positivity, the patient was diagnosed with ankylosing spondylitis according to Modified New York Criteria and a treatment of nonsteroid anti-inflammatory and sulfasalazine 500 mg, gradually increased 2 gr a day [4]. Any other side effects such as gastrointestinal upset, allergic skin reaction, hepatic toxicity were not seen. The follow-ups showed that the toe nails of both feet of the patient started to turn yellow within the second year of the sulfasalazine treatment and yellowness became more evident in the following 7 to 8 months. The reasons that can cause this yellowness such as fungus eliminated with Potassium hydroxide (KOH) examination and culture after the consultation with dermatology clinic. The patient declared that she did not use any other medicine regularly. After the rheumatic examination it was seen that there wasn’t any symptom of inflammatory disease such as collagen tissue disease. In the laboratory examination ANA, ENA, anti-dsDNA, RF, and anti-CCP values were negative. Urinary findings, renal function values were normal. The chest radiography was normal and the consultation with pulmonology clinic proved that there wasn’t any pathology in the lungs. The consultation with cardiovascular surgery clinic examined the arteriovenous system and lymph circulation and there wasn’t any pathology. The yellowish colour of toenails disappeared two months after the patient stopped SLZ use.

3. DISCUSSION

This is a rare case we present since the colour change in the toenails of our patient  in last two years considered to the use of SLZ after diagnosis of AS .

The yellow discoloration toe nails can have many reasons. It is generally seen after a fungal infection on the toe nails. Besides, it can be seen as the side effect of some medicines or it can be one of the symptoms of a systematic illness.

Onychomycosis of the patient whose toe nails in both feet turn yellow was discussed with the dermatology clinic. In the dermatologic examination all the pathologies such as fungus were eliminated.

Some drugs that are used in various treatments can have side effects that can cause yellowness on the toe nails. Tetracyclines may produce a yellow fluorescence of the lunulae or a yellow discoloration of the entire nail plate [5]. Having been asked, our patient mentioned that she wasn’t using any antibiotic before the yellowness and she wasn’t using any other medicine regularly either.

Yellow nails cannot be seen alone, it can be one of the components of a syndrome. Yellow nail
Yellow Nail Syndrome (YNS) is a rare disorder of unknown cause characterized by the classic triad of yellow and thickened nails, lymphedema, and respiratory manifestations. According to an analysis of 97 YNS patients reported by Nordkild et al. [6], 89% had yellow nails, 80% had lymphedema, and 36% had lung disease. We examined the yellow nail syndrome in the differential diagnosis of our patient. Since the patient didn’t have any other symptoms, yellow nail syndrome wasn’t considered for her.

Smoking has been linked to many skin conditions for more than 150 years and evidence exists that skin involvement might be a conspicuous marker of other tobacco-related disease [7]. The yellow rounded digit and harlequin nail signs are two other simple clinical signs which aid the diagnosis of health conditions [8,9]. Our patient was smoking a package weekly. Since the yellowness was seen only on the toe nails and since the toes weren’t yellow, the color change cannot be associated with smoking (Figs. 1-2).

In some of the rheumatic diseases, especially in the collagen tissue diseases nails changes are seen frequently. Change of nail color is not an expected symptom in diseases except psoriatic arthritis in spondyloarthropathies. However, some of the medicines used for the treatment of these diseases can implicitly cause some lesions on the nails.

The series of Sfikakis et al. [10] which includes 5 cases receiving anti-TNF treatment; two rheumatoid arthritis, two Behçet’s syndrome and one ankylosing spondylitis; put forth that three patients developing psoriasis after anti-TNF treatment also had onycholysis and yellow discoloration. Any biologic agents has not been used for the treatment of this patient.

Some people will develop orange colored urine and even orange skin while they are on sulfasalazine treatment. This should not cause any alarm. It is usually harmless and goes away after medication is over.

We haven't seen any studies or any case reports in the literature indicating that sulfasalazine causes nail discoloration. In our case, the discoloration of the nail which may be associated with taking sulfasalazine is first case. However, there has been a regression in the discoloration on the nails for two months since the patient freely wanted to stop taking sulfasalazine.

4. CONCLUSION

As a result, sulfasalazine is a medicine which is used frequently in some phases of spondyloarthropathy. However, it is important to be conscious of the rare side effects besides the well-known ones. Further studies both on the effectiveness and the side effects of spondyloarthropathy diseases will enhance the awareness of the rare side effects.

CONSENT

Consent was obtained from the patient prior to manuscript submission.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES


© 2015 Tekeoğlu et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
http://sciencedomain.org/review-history/11680