Introduction

The Yellow Nail Syndrome is a rare clinical entity, first described in 1967 by P.D. Samman and W.F. White. The triad slow-growing dystrophic yellow nails, lymphedema and chronic respiratory disorders is the typical manifestation of the disease but some variations have been described as well as associations with chylothorax, chylous ascites, intestinal lymphangiectasia, thyroid abnormalities, malignancies and immunoglobulin A (IgA) deficiency.

We present a case of a 55-years-old woman that had an insidious onset of respiratory disorders and chronic sinusitis, suspected to be infectious throughout the hospitalizations, associated with therapeutically neglected autoimmune thyroiditis.

Keywords: yellow nails, pleural effusion, rare syndromes, lymphedema, bronchiectasis, chronic sinusitis

Case report

We present the case of a 55 years-old woman, college-educated, working as a high school teacher, that presented to our clinic with 5 years of chronic coughing (1 year of dry cough and 4 years of cough with serous expectoration), slow growing toe and finger nails colored greenish – yellow and pleural effusion.

Her personal medical history includes:

- Childhood diseases (Paramyxovirus at 6 years old, Varicella at 8 years old)
- Infectious Hepatitis with Hepatitis Virus A (at 12 years old)
- Chronic sinusitis (22 years old)
- Cholecystectomy (43 years old)
- Autoimmune thyroiditis (at 50 years old)
- Feriprive anemia (since 2002)
- Known allergies: Iodine, pork protein
- Never smoked and consumes alcohol only occasionally.

In 2009 she presented to pulmonology ambulatory care for evaluation of the dry cough. The clinical exam revealed no abnormal respiratory sounds, the chest X-ray showed normal pulmonary fields. It was treated as a common cold.

One year later, the patient presented the same (chronic by now) dry cough and so in 2010 she had another X-ray examination that showed, in dynamics compared to the previous one, demineralization of all skeletal structures viewed within the chest X-ray field and a round thoracic kyphosis, bilateral apical pachypleuritis. Once again, an infectious disease was suspected but has been redirected to see an endocrinologist.

The visit to Endocrinology was delayed by patient’s will and in 2011 she returned to her hometown Pulmonology Hospital, where a progression of respiratory pathology has been noticed as the imagery examination...
revealed discreet basal bilateral bronchiectasis, bilateral apical pachypleuritis, round thoracic kyphosis.

Since the symptoms intensified and associated serous expectorations, headaches and periods of shortness of breath, an X-ray of anterior sinuses was performed. It showed an intense opacification of frontal sinuses, obstruction of nasal fossae, opacification of maxillary sinuses. She was prescribed antibiotics and once again, the indication of seeing an endocrinologist was made.

In 2012 she went to “Marius Nasta” Institute of Pulmonology in Bucharest with the same worsened recurring symptoms that chronically re-appeared within one year’s period. At the chest X-ray examination a pulmonary nodule diffuse delimitated superior, latero-cardiac in the anterior segment of her left lower lobe, and minimum bilateral pleural effusion was described.

Prior to this hospital presentation, the patient was consulted by an endocrinologist. She was diagnosed with autoimmune thyroiditis and levothyroxine was prescribed. Pleural effusion was considered secondary to autoimmune thyroiditis (therapeutically neglected – the patient interrupted the treatment by herself). The clinical diagnose was pneumonia of the left lower lobe, and minimum bilateral pleural effusion was described.

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In 2014 she presented herself at our clinic with a cough, serous expectoration and mild shortness of breath. Based on prior documentation and anamnesis, she had two new symptoms: persistent swelling of lower limbs and eyes and slow growing yellow-colored nails.

Thoracic imagery showed the same aspect of pleural effusion. The pleural liquid extracted by thoracentesis showed no tumor cells, inflammatory cells present with the proportions of 84% lymphocytes and 16% eosinophils.

To exclude an autoimmune systemic pathology the blood antinuclear antibodies (ANA-test) were dosed and the result showed a value of 1/100 titer – upper limit values.

The ORL examination described unhomogenous opacification with hypertrophy of the mucosa from the maxillary sinus and demineralization of the sinus walls.

The patient was prescribed oral doses of Vitamin E – 1000 IU per day with little clinical effect.

Discussions

The Yellow Nail Syndrome (YNS) is a rare condition with erratic occurrence and manifestations, hence its difficult diagnosis and the many traps of clinical assessment. Very little data, most of it coming from the case reports, show no predilection for a particular gender, group of population or age. It is believed to occur after the age of 40 (most clinical cases published describe patients over 40 years old) and the evolution is highly unpredictable.

A journal article from 2006 raised the possibility that YNS can be associated with tuberculosis – given a case report from Spain but there were no further associations between YNS and infection with Mycobacterium tuberculosis in other cases reported. The life expectancy is believed to be greatly reduced for the patients with YNS compared to
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ty. In an article from 1972, Hiller and Rosenow8 sug

gested that the diagnosis of the YNS can be strongly

suggested in the presence of two out of the three manifesta

tions if the clinical onset lacks another plausible explana

tion, but the presence of slow-growing yellow nails is a

crucial condition for the correct diagnosis.

The pathogenesis of YNS is poorly understood. Structural or functional lymphatic abnormalities and increased vascular permeability to albumin are a proposed pathologic mechanism.

Since Yellow Nail Syndrome has been described in previ

ous case reports as secondary to another condition (e.g.,

connective tissue disease, a thyroid disorder or malignan

cy), the fact that a mistreated thyroid disease has been in

this patient’s history for about 3 years might be considered

as the onset of YNS.

Also, YNS has been reported as an adverse effect of

medicines such as penicillamine, bucillamine or gold sodi

um thiomalate5. In the light of this theory, the suspicion of

side effects due to long-term antibiotics use has been raised

but the medication was administered intermittently and

but long periods between the cures.

The particularity of this case consists primarily in the

typical onset of the disease: first the chronic cough associ

ated with autoimmune thyroiditis – two apparently sepa

rate clinical entities. Then, the bronchiectasis and the acute

sinusitis appeared. The pleural effusion was fist associated

with a lower lobe pneumonia and later, after its persistence,

the connection with the thyroid pathology was made. After

almost 5 years of symptomatology, the yellow coloration of

the nails and the lymphedema appeared, finally completing

the diagnosis of Yellow Nail Syndrome.

Vitamin E treatment had little effect but other thera

peutical options described in the literature (itraconazol, for

example) also showed modest results10. Nail changes seem

to result from impairment of lymphatic drainage of the

fingers and toes. The yellowish color is probably due to

lipofuscin pigment, resulting from lipid oxidation of free

radicals11.

Conclusions

YNS is a controversial syndrome that is usually associated

with an autoimmune condition: in our case autoimmune

thyroiditis. Pulmonary manifestations were classic but sinu

sal manifestation exacerbated year by year. Probably, if the

patient would have taken the autoimmune pathology seri

ously from the onset, the debut of the syndrome might have

been delayed. Even so, there is no certainty that the nails

coloration or the persistence of the pleural effusion would

have an earlier or a later onset.

Further reports and focus on the immunology of the

syndrome is needed in order to understand how to delay if

not prevent the onset in suspected patients.

Disclosure: The authors take full responsibility in the

information presented in this article and acknowl

edge that they have the written consent of the patient
to publish the medical data in this paperwork.

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13. Iqbal M, Rosoff LJ, Marzouk KA, Steinberg HN. Yellow nail syndrome: a case

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Since this case report shows that chronic sinusitis was

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Still, the most important clinical manifestation that

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