

## Case Report: Reynolds Syndrome

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Reynolds et al described in 1971, 6 patients with classical primary biliary cirrhosis who presented concomitantly with varying degrees of scleroderma. Since then this association has been called Reynolds Syndrome, being clearly documented over the years.

This disease is more common in women and it presents as a systemic scleroderma localized type CREST (calcinosis, Raynaud's phenomenon, alterations in esophageal motility, sclerodactyly and telangiectasia). To establish this diagnosis is not necessary to gather all the elements, only with two can already diagnose an incomplete CREST [1].

The liver symptoms are almost unnoticed by patients and if they are well tolerated, this is the reason why the medical consultation is delayed [2].

Due to the fact that it is a rare and underdiagnosed disease, we present the case of a female patient who consulted for lesions in the skin compatible with scleroderma, and subsequently, during the study, hepatic alterations were found. We came to the conclusion of the diagnosis of Reynolds syndrome.

**Case Report**

We present a 45-year-old woman patient, born and residing in Quito, housewife, with no relevant personal or family history, who came to our clinic due to severe pruritus episodes of several months of evolution. It has been treated by several dermatologists with antihistamines without any improvement. Physical examination revealed hyperpigmentation predominant in face (Figure 1), sclerosis predominantly on the back of both hands (figure 2) and hypo and hyperpigmented lesions with the appearance of salt and pepper in chest. In the rest of the skin there is generalized xerosis. In addition, slightly icteric sclera's and ragades are evident in the perioral region (Figure 1). Hepatomegaly is not palpable.



**Figure 1:** Hyperpigmentation predominant in face, hypo and hyperpigmented lesions with the appearance of salt and pepper in chest.

Slightly icteric scleras and ragades are evident in the perioral region.



**Figure 2:** Sclerosis predominantly on the back of both hands, and icteric nails.

The pertinent laboratory exams were also carried out with the following results: transaminases TGO: 54.5 U/L, TGP: 103.6 U/L, GGT: 502U/L, Direct Bilirubin 0.73 mg/dl, Indirect Bilirubin: 0.10 mg/dl, Total Bilirubin: 0.83 mg/dl.

Due to the alteration of the liver function, we request tests hepatitis A, B and C serological tests, which were negative, we also requested a hepatic ultrasound reports: Liver of normal size and shape, increased echogenicity due to increased fat deposit without focal lesions. (Figure 3)



**Figure 3:** Liver of normal size and shape, increased echogenicity due to increased fat deposit without focal lesions.

Facing a patient with cirrhosis without a history of chronic ingestion of alcohol or medication and without evidence of viral hepatitis, we suspected a picture of immune origin, so he requested anti-antimitochondrial bodies (AMA) that were positive. Immunological analysis also found ANA and anti-centromere antibodies Ro positive.

### Discussion

There are several classifications of scleroderma, the proposal of Maricq and Valter, (1) is based on the spectrum of the disease and classifies CREST as a type IV scleroderma, where there is no cutaneous alteration or only sclerodactyly; if there are telangiectasia, these should be accompanied by two or more CREST components or if the anti-fracture antibodies are positive, they need two more elements of the symptom complex to confirm the diagnosis [3]. The association of CREST syndrome with liver diseases was first argued by Murray-Lyon et al. [4]. Who reported two cases of primary biliary cirrhosis and CREST syndrome. Later, Reynolds et al. described more cases and defined it as a syndrome [5].

Primary biliary cirrhosis is an autoimmune disease that usually affects middle-aged women and is characterized by inflammation and destruction of bile ducts; causes cholestasis and cirrhosis. Just like our patient's exams showed. Nearly 50% of patients with primary biliary cirrhosis have an autoimmune disease, such as systemic sclerosis, Sjögren's syndrome, and Raynaud's phenomenon, our patient however didn't show any concomitant autoimmune disease.

Primary biliary cirrhosis is the most common manifestation of systemic sclerosis. The frequency of association between systemic sclerosis and primary biliary cirrhosis is 5-10% and usually the first manifests as a CREST syndrome [6,7]. In limited systemic sclerosis, 8% of antimitochondrial antibodies have been reported, targeting 72 kd M2 autoantigen; patients with primary biliary cirrhosis have in 9-29% anti-cholera antibodies, which are characteristic of limited systemic sclerosis [3].

Primary biliary cirrhosis begins insidiously, but it is more frequent that it presents with pruritus without jaundice, accompanied by fatigue, or that is accidentally discovered when performing a liver profile that evidences high concentrations of alkaline phosphatase plus the presence of antimitochondrial antibodies [8]. In the case of our patient she only showed incoercible pruritus. It is also important to emphasize that our this presented case is compatible with the CREST syndrome, which was considered Incomplete because it

didn't present calcinosis. The respective analysis found ANA and anticentromere antibodies positive, this last one in 82-96% of the population, with a specificity of 96% [6].

Survival of patients with primary biliary cirrhosis without treatment is about 10 years. It seems that he would have a more benign course when he is associated with scleroderma [9]. The treatment of choice is ursodeoxycholic acid. Other drugs used are immunosuppressants and antifibrotics, hepatic transplantation is also a therapeutic alternative [10]. Reynolds syndrome is most commonly seen in women around the age of 50. The manifestations of CREST precede in months to years the hepatic manifestations, presenting as an incomplete CREST [7].

The prognosis of the disease depends on the evolution of primary biliary cirrhosis. Ursodeoxycholic acid decreases the use of pruritus and hyperpigmentation, but also improves cutaneous sclerosis by acting as an immunomodulation, for what constitutes the treatment of choice of Reynolds syndrome [11]. In the case of our patient she clinically improved her pruritus, the hepatic panel and icteric scleras. It is important to remember this disease is diagnosed in 80% of cases because of the scleroderma or pruritus, jaundice, xanthomas, hepatomegaly and/ or alteration of the general condition, typical of primary biliary cirrhosis. It can also present with diffuse hyperpigmentation that respects the mucous membranes and can become very intense [12].

### Conclusion

Patients with systemic autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, Sjögren syndromes, and scleroderma may present evidence of concomitant liver disease [13].

Hepatic impairment in these diseases has been well documented, but is generally rare. The severity is variable and may be manifested only with a mild asymptomatic alteration of the transaminases or it may be initiated as cirrhosis with severe hepatic insufficiency [12].

It should be noted that patients with systemic autoimmune diseases have a high relative risk for developing liver disorders such as autoimmune hepatitis, primary biliary cirrhosis, nodular regenerative hyperplasia and portal fibrosis with abnormal lobular architecture and even vascular syndromes such as Budd-Chiari syndrome [6].

This is why in patients presenting to our office with systemic autoimmune diseases and / or scleroderma should be performed hepatic function tests to detect these alterations that can often coexist silently. Similarly, having a patient with alterations in the liver profile performed a thorough skin examination to determine the presence or absence of scleroderma, which would guide us to a Reynolds syndrome [12].

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