Scholars Journal of Medical Case Reports
Sch J Med Case Rep 2017; 5(6):382-384
©Scholars Academic and Scientific Publishers (SAS Publishers)
(An International Publisher for Academic and Scientific Resources)
ISSN 2347-6559 (Online)
ISSN 2347-9507 (Print)
DOI: 10.36347/sjmcr.2017.v05i06.008

Association of rheumatoid arthritis with pernicious anemia and Gougerot Sjogren syndrome: report of a case

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Abstract: Rheumatoid arthritis (RA) is a chronic rheumatic disease that may be associated with iron deficiency or anemia of inflammation. Few autoimmune anemias have been described in association with RA. We report, through this observation, an association of RA to a Gougerot Sjögren syndrome and pernicious anemia because of its rarity. The multiple autoimmune syndrome is a rare pathological condition, predominant in women. The main interest is in the early detection of new autoimmune diseases by monitoring of susceptible patients. There would be probably a genetic predisposing.
Keywords: Rheumatoid arthritis, Gougerot Sjögren syndrome, pernicious anemia, multiple autoimmune syndrome

INTRODUCTION

Rheumatoid arthritis (RA) is a chronic rheumatic disease that may be associated with iron deficiency or anemia of inflammation. Few autoimmune anemias have been described in association with RA. When this association exists, it fits most often as part of a multiple autoimmune syndrome.

We report, through this observation, an association of RA to a Gougerot Sjögren syndrome and pernicious anemia because of its rarity.

CASE REPORT

Miss BZ, 52 years old, followed for pernicious anemia for 11 years, and has 1 year after deforming polyarthritis affecting large; medium and small joints; associated with dry eyes and mouth syndrome and paresthesia of the lower limbs.

On physical examination: the patient has an anemic syndrome; deformations like RA; tendon reflexes are abolished in the lower limbs, and are exaggerated in the upper limbs.

In biological exam, there is an inflammatory syndrome (sedimentation rate = 165 mm at the 1st hour). A positive immunological tests (anti CCP antibody > 300, Latex = 256, Waaler rose = 512). Macrocytic normochromic aplastic anemia (hemoglobin = 5,6 g/dl, mean corpuscular volume = 100 µ3, mean corpuscular hemoglobin concentration = 32,9 g/100m, reticulocytes = 54900); with hypovitaminsis B12 (30 pg/ml).

Radiologically, there is a very significant structural damage of the hands and feet. (Fig 1; Fig 2)

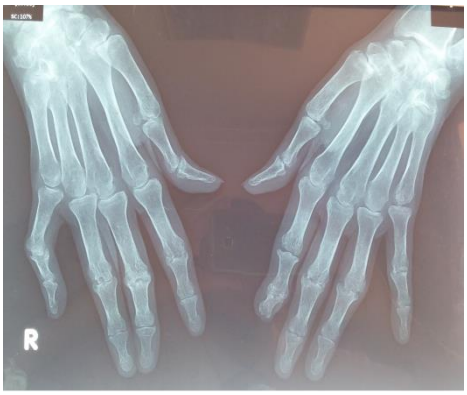

Fig-1: Radiography of the hands

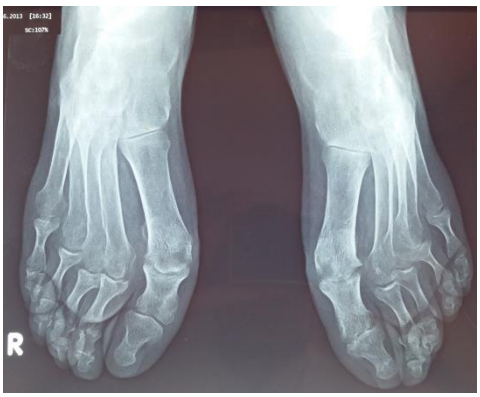

Fig-2: Radiography of the feet

In histology, the biopsy of the salivary gland showed sialadenitis stage IV according to the classification of Chisholm and Masson. The Gastroesophageal gastroduodenal endoscopy, made in the balance sheet impact of anemia, showed no atrophic

erythematous pan gastritis without intestinal metaplasia or dysplasia, with the presence of Helicobacter pylori.

Electro neuro myography showed evidence for a severe polyneuropathy motor and sensory axonal of 4 limbs.

The diagnosis of pernicious anemia associated with rheumatoid arthritis and Gougerot Sjogren syndrome has been retained realizing a multiple autoimmune syndrome. A treatment based on B vitamin therapy, methotrexate, and folic acid. The clinical and biological evolution was considered favorable.

DISCUSSION

Multiple autoimmune syndrome (MAS) is an entity that is rare and special. It is defined by the coexistence in the same individual of three or more autoimmune diseases [1].The multiple autoimmune syndrome can be classified into three groups that correspond with the prevalence of their being associated with one another in patients with two autoimmune diseases, this classification is helpful when signs of a third disorder emerge (Table 1) [2]. This classification helps to detect a new condition liable to appear in a patient who has had two previous autoimmune diseases. It provides a basis for analysis of the pathophysiological mechanisms of autoimmunity [3]. Few observations in the literature has studies pernicious anemia in multiple autoimmune syndrome [4].Our patient may be classified as type 2 or type 3 of the pre-mentioned classification. She combines three autoimmune diseases: Rheumatoid arthritis, pernicious anemia, and Gougerot Sjogren's syndrome.

Rheumatoid arthritis, among the most frequent autoimmune disease, is characterized by a chronic joint inflammation possibly leading to severe damage [5]. In our patient this diagnosis was established on arguments clinical, immunological and radiological; it is frequently associated with secondary Sjogren's syndrome (75, 73% of cases according Najah et al) [6]. The rheumatoid anemias are generally mild to moderate normochromic normocytic, microcytic or less often, and are generative [7].

The pernicious anemia is an autoimmune disease caused by vitamin B12 deficiency due to atrophic gastritis or loss of parietal cells or lack of intrinsic factor [8]. It may be associated with autoimmune diseases, such as Gougerot Sjögren syndrome, systemic lupus, vitiligo[9]. Our patient has a erythematous pan gastritis without intestinal metaplasia or dysplasia, with thepresence of Helicobacter pylori; In the literature this disease is characterized by a gastric atrophy. Pernicious anemia is known to be associated with gastric adenocarcinoma as well as gastric carcinoid tumors. In a population-based cohort study in Sweden, the risk of gastric carcinoma was increased 3-fold and that of gastric carcinoid tumors was increased 13-fold in patients with pernicious anemia [10, 11]. H. pylori infection is unlikely to be associated with pernicious anemia [12]. The Gougerot Sjögren syndrome is a chronic inflammatory disease that can be primitive (isolated) or secondary associated with a Systemic disease such as rheumatoid arthritis, scleroderma, polymyositis, vasculitis, autoimmune thyroiditis[13]. The association of, a Gougerot Sjögren syndrome, a rheumatoid polyarthritis and pernicious anemia is reported by Hamza and al [14]. Diagnosis of Gougerot Sjögren syndrome was established in our patient on clinical and histologicalarguments.

Poly neuropathy of our patient is multifactorial may be secondary to the pernicious anemia or Gougerot Sjögren syndrome. Neurological clinical manifestations of pernicious disease are extremely polymorphic and of varying severity, from sensory polyneuropathy up to combined degeneration spinal cord[15].

CONCLUSION

Multiple autoimmune syndrome is a rare pathological condition, predominant in women. The main interest is in the early detection of new autoimmune diseases by monitoring of susceptible patients. There would be probably a genetic predisposing.

Table-1 : Classification of Multiple autoimmne syndrome

Type 1	Type 2	Type 3
▪ Myasthenia gravis ▪ Thymoma ▪ Polymyositis ▪ Giant cell myocarditis	▪ Sjögren's syndrome ▪ Rheumatoidarthritis ▪ Primary biliary cirrhosis ▪ Scleroderma ▪ Auto immune thyroid disease	▪ Thyroid disease ▪ Myasthenia gravis ▪ Thymoma ▪ Sjögren's syndrome ▪ Pernicious anemia ▪ Idiopathic thrombopenic purpura ▪ Addison'sdisease ▪ Type 1 diabètes mellites ▪ Vitiligo ▪ Auto immune hemolytic anémia ▪ Systemic lupus erythematosus ▪ Dermatitisherpetiformis

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