



Cas clinique

A case report of chronic lymphocytic leukemia during the Rheumatoid Arthritis.

Une observation d'une Leucémie Lymphoïde Chronique survenue au cours de la Polyarthrite Rhumatoïde

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Abstract

The Rheumatoid arthritis is a chronic inflammatory disease whose clinical symptoms are dominated by osteoarticular pain. The Chronic lymphocytic leukemia is a malignant hemopathy characterized by proliferation of B-lymphocyte with CD5 marker. The dysimmunity abnormalities are common during the Chronic lymphocytic leukemia. The most described are Autoimmune Hemolytic Anemias. We report the case of women who was 54-year-old, with no medical history, followed at the department of rheumatology for rheumatoid arthritis for four years. She was treated with corticosteroids and hydroxychloroquine with a favorable evolution on clinical and biological symptoms. The occurrence of blood lymphocytosis that never existed in the medical history of the patient, nor at the beginning of her rheumatic disease motivated the achievement of immunophenotyping which found the Matuites score at 5/5 confronting of Chronic lymphocytic leukemia diagnosis. The chemotherapy with the RCVP protocol led to a complete remission on both pathologies. The interest of this study is the unusual fact of this association in our department. It's would pose a problem of understanding in the mechanism pathogenesis of appearance of lymphoproliferative syndrome during the Rheumatoid arthritis. Also,

this study arouses the importance of blood count exam in the follow-up of autoimmune diseases.

Keywords: Chronic Lymphocytic Leukemia, Rheumatoid Arthritis, Abidjan

Résumé

La polyarthrite rhumatoïde est une maladie inflammatoire chronique dont les manifestations cliniques sont dominées par les douleurs osseuses. La leucémie lymphoïde chronique est une hémopathie maligne caractérisée par une prolifération des lymphocytes B, CD5+. Les anomalies dysimmunitaires sont fréquentes au cours de la leucémie lymphoïde chronique. Les plus fréquentes décrites sont les anémies hémolytiques auto-immunes. Nous rapportons l'observation d'une femme de 54 ans, sans antécédents médicaux particuliers, suivie au service de la rhumatologie pour une polyarthrite rhumatoïde depuis environ 4 ans. Elle était traitée par une corticothérapie associée à l'hydroxychloroquine avec une bonne évolution sur les symptômes cliniques et biologiques. La survenue progressive d'une lymphocytose sanguine qui n'a jamais existé dans les antécédents de cette patiente ni au début de sa maladie rhumatismale nous a motivé à réaliser un immunophénotypage lymphocytaire qui retrouvait le score de Matuites à 5/5 confrontant

au diagnostic de la leucémie lymphoïde chronique. La chimiothérapie par le protocole RCVP a entraîné une rémission complète sur les deux pathologies. L'intérêt de cette observation réside d'une part dans le caractère inhabituel de cette association qui poserait en outre un problème pathogénique dans la compréhension du mécanisme de la survenue d'un syndrome lymphoprolifératif au cours de la Polyarthrite Rhumatoïde. Cette étude devait aussi susciter l'importance de l'hémogramme dans le suivi des maladies auto-immunes.

Mots clés : Leucémie Lymphoïde Chronique, Polyarthrite Rhumatoïde, Abidjan

Introduction

The Chronic lymphocytic leukemia is a malignant homeopathy characterized by monoclonal proliferation of mature B-lymphocytes, expressing the CD5 marker [1]. It's the most common of indolent hemopathy of adults [2, 3]. The etiopathogenic mechanism of this disease is multifactorial incriminating the cytogenetic, molecular abnormalities, the dysimmune components [2]. The Rheumatoid arthritis is a disease with an autoimmune component, characterized by joint pain and bone's deformity [4]. Its involvement in the occurrence of a hematological malignancy is not an exceptional event. The cases of lymphoma secondary to rheumatoid arthritis have been described with a relative risk of occurrence between 2 and 3 [5, 6]. The Autoimmune hemolytic anemias and the sjogren syndrome are the most common described during the Chronic lymphocytic leukemia [7]. We report in this study a case of Chronic lymphocytic leukemia occurring during rheumatoid arthritis. This case is an unusual fact in our department and arouses pathogenic interest. What motivates us has added this case to those reported in the literature data, suggesting a close relationship between lymphocytosis and dysimmunity and showing the interest of the blood cell count exam in monitoring

autoimmune diseases.

Case report

Mrs. K.A.J, 54 years old with no medical history was followed at the rheumatology department for progressive rheumatoid arthritis. According to the anamnesis, the symptoms started 6 months ago with osteoarticular pain associated with a moderate fever and a physical asthenia. The patient consulted the hematology department at the Cocody hospital. The physical examination noted no particular signs other than pain symptoms. The biological examination such as latex test and the waaler rose exam were positive respectively at 24 IU/ml and 32 IU/ml. the Streptolysin O-type antibody, the citrulline cyclic anti-peptide antibody assay and the CCP2 were negative. The inflammatory assessment was positive with a C-reactive protein at 48 mg/l. The blood Protein Electrophoresis noted an increasing of gamma globulin at 26.7G/L and decrease in the blood level of albumin at 27.7G/L. The blood cell count exam noted the number of leukocytes and lymphocytes respectively 9.16 G/L and 3.5 G/L. There was a bicytopenia consisting of moderate anemia with 11 g/dl as hemoglobin rate and thrombocytopenia at 120G/L. the direct coombs test was negative. The patient was treated with corticosteroid 1.5 mg/kg and hydroxychloroquine (Plaquenil) associated a regular clinical and biological monitoring. Two years after the treatment, the osteoarticular pain symptoms and the biological inflammatory syndrome were disappear. The leukocytes ranged between 7-13G/L, the lymphocytes between 3.5-4G/L; hemoglobin rate between 11-12G/L and the blood platelets between 100-200GandL. There were some episodes of infectious syndrome for which the patient was hospitalized and treated with antibiotics with a favorable evolution. Three years, after its follow-up, we observed a progressive increase of blood leukocytes ranging from 16 to 25 G/L, lymphocytes between 12-20G / L, hemoglobin

rate between 7-9g/dl and the decrease of blood platelets between 60-98G/L. She was addressed to our department where the microscopic examination of blood smear noted the lymphocytes with small size similar to Gümprich's shadow. According to the immunophenotyping exam, these lymphocytes expressed CD19, CD5, CD23, CD20 and didn't express FMC7 and CD79b confronted to Matutes score 5/5 of the Chronic lymphocytic leukemia. The protein electrophoresis, which had normalized, showed the decrease of blood albumin at 25G/L. we had conclude with a case of evolutive rheumatoid arthritis evolving for 4 years with no medical history, nor other associated pathologies which the clinical and biological symptoms were disappeared after using the treatment with corticosteroids and plaquenil, which the lymphocytosis during its follow-up discovered the chronic lymphoid leukemia. The prognosis report classified the patient in stage B of BINET. Treatment with the R-CVP protocol allowed complete clinical and biological remission on both pathologies.

Discussion

The Chronic lymphocytic leukemia is the most common adult leukemia in Western countries. His incidence is 5/100 000 after 50 years old, and 30/100 000 after 80 years old. It is very rare before 40 years old and its frequency increases with age [2, 3]. The association of autoimmune pathologies and lymphoproliferative syndromes is not uncommon. In 1967, Miller and coll suggested the possibility of this association [8]. According to Jaffe ES and coll, the sjogren syndrome and autoimmune anemias are the most common during the chronic lymphocytic leukemia [9]. Lehner-Netsch.G and coll described the possible association between the lymphoproliferative syndrome and autoimmune disease such as sjogren syndrome and autoimmune haemolytic anemia [7]. The Rheumatoid arthritis is an autoimmune disease that can be associated with

lymphoid hemopathy. The incidence in lymphoma is estimated between 92 and 105.9 per 100,000 with a relative risk between 2 and 3 according to the authors [5, 10]. Since the study of Druet P and coll, who had studied 7 cases of association between the Rheumatoid arthritis and Chronic lymphocytic leukemia, the association of these two diseases is rarely described [11]. Hamblin TJ and coll reported a frequency of approximately 10 to 35% of Chronic lymphocytic leukemia associated with autoimmune haemolytic anemias [12]. According to Pasquet.F and coll, the autoimmune diseases the most in chronic lymphocytic leukemia are autoimmune cytopenias such as the autoimmune anemias, the autoimmune neutropenia, the idiopathic autoimmune, the thrombocytopenic purpura. The Rheumatoid arthritis is, however, the most during bronchial adenocarcinoma [13]. Pathogenically, the mechanism of occurrence of autoimmune diseases during chronic lymphocytic leukemia is not unambiguous. The Chronic lymphocytic leukemia is an accumulative B-cell disease, the clone is essentially tumor cells derived from self-reactive B-receptors, CD5 + B cells and will be responsible for the production of auto-antibodies often favored by an immune deficiency [13]. However, by what mechanism would obey the opposite phenomenon as in the Rheumatoid arthritis? Lehner-Netsch.G and coll suggested the problem of the lympho-reticular system disorder which would cause a disorder of cellular homeostasis [7]. In the lymphoma model, two successive studies by Baecklund and coll. And Wolfe.F and coll incriminated the inflammatory activity observed during Rheumatoid arthritis as the major determinant of risk [10, 14]. Merle-Béral H and coll noted the phenomenon of antigenic stimulation [15]. Are these pathogenic models explained in Chronic lymphocytic leukemia which is an accumulation B cells disease?. We would conclude by excluding the possibility of two intercurrent processes without there being cause-and-effect phenomenon between chronic lymphocytic

leukemia and rheumatoid arthritis. Therapeutically, only the treatment of Chronic lymphocytic leukemia with the RCVP protocol led to a good clinical remission and the stabilization of its rheumatic symptomatology, which would strengthen the arguments of the relationship between autoimmune diseases and lymphoproliferative syndromes described in the literature data. [7].

Conclusion

We report a case of chronic lymphocytic leukemia occurring during the course of Rheumatoid arthritis, which is an unusual fact. The pathogenic problem of this association remains. This study highlights the importance of monitoring the blood count during follow-up of autoimmune diseases.

Authors's Contributions:

Dr PACKO DSS is the main author of this article. Dr Nguessan Nériss is the first responsible of this patient at the department of Rheumatology. Dr Meité N'dogomo and Dr KOUAKOU Boidy participated in the care of the patient and the writing of the article; Dr Kamara Ismael and Dr Conde Abdoulaye participated in the literature search; Professor Danho Nanho Clotaire and Professor Pascal Mbelesso participated in the scientific supervision and the correction of this study.

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