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CASE REPORT

suppl. Informations

Secondary pulmonary syphilis: Case report and review of literature

Syphilis secondaire pulmonaire : cas clinique et revue de la littérature

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Summary
Introduction. — Syphilis is a sexually transmitted disease that can affect numerous organs in its secondary or tertiary stages. We describe a case of secondary syphilis with pulmonary involvement and we present a literature review.
Patients and methods. — A 69-year-old male patient was admitted to hospital for dyspnoea and extended papular exanthema with palmoplantar involvement. The serological test for syphilis was positive. Ocular examination showed bilateral papillitis and retinal haemorrhage. Chest radiography revealed an interstitial alveolar infiltrate predominantly in the upper lobes, mild pleural effusion and hilar adenopathy. These infiltrates were slightly hypermetabolic on PET scan suggesting inflammatory or infectious origin. Treatment with intravenous penicillin G was effective on cutaneous, ocular and pulmonary manifestations.
Discussion. — Lung involvement in secondary syphilis is poorly known and rarely described. We found 27 cases of pulmonary syphilis reported in English and the main European languages since 1967. Mean age at diagnosis was 46 years with clear male predominance (89%). HIV co-infection was declared in 5 cases. *Treponema pallidum* was found in 6 patients using PCR on bronchoalveolar lavage (BAL) (3 patients) or on a lung biopsy (1 patient), immunohistochemistry (IHC) on BAL (1 patient) and Giemsa staining on a pleural fluid sample (1 patient). Chest X-rays may show unilateral or bilateral infiltrates or nodules with or without pleural effusion or hilar adenopathy. Sub-pleural involvement is frequent and penicillin is the treatment of choice.

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Conclusion. — Pulmonary syphilitic involvement should be suspected where pulmonary symptoms or radiological changes occur in secondary syphilis. IHC, special staining or PCR on BAL, pleural fluid or lung tissue are useful for the identification of spirochetes.

MOTS CLÉS
Syphilis ;
Exanthème ;
Pulmonaire ;
Treponema pallidum ;
PCR ;
Immunohistochimie ;
Coloration MGG ;
Microscopie à fond noir ;
Pénicilline

Résumé
Introduction. — La syphilis est une infection sexuellement transmissible pouvant toucher divers organes dans sa phase secondaire ou tertiaire. Nous rapportons un cas de syphilis secondaire pulmonaire et proposons une revue de la littérature sur ce thème.
Observation. — Un homme de 69 ans était hospitalisé pour une dyspnée associée à un exanthème papuleux étendu, légèrement squameux, avec atteinte palmo-plantaire. La sérologie syphilitique était positive. L'examen ophtalmologique montrait une papillite bilatérale avec hémorragies rétiniennes. À la radiographie pulmonaire, un syndrome alvéolo-interstitiel prédominait dans les lobes supérieurs et s'associait à un épanchement pleural. La tomographie à émission de positons—tomodensitométrie (TEP-TDM) évoquait une origine infectieuse ou inflammatoire. Le traitement par pénicilline G permettait une régression importante des lésions cutanées, de l'œdème papillaire et des infiltrats pulmonaires.
Discussion. — L'atteinte pulmonaire de la syphilis secondaire est rarement décrite. Nous avons recensé 27 cas de syphilis secondaire pulmonaire publiés depuis 1967 en anglais et dans des langues européennes courantes. L'âge moyen des patients était de 46 ans et 89 % d'entre eux étaient de sexe masculin. Une co-infection VIH est signalée dans 5 cas. *Treponema pallidum* a pu être identifié dans 6 cas. Les moyens d'identification sont la PCR sur lavage broncho-alvéolaire (LBA) (3 patients) ou sur biopsie pulmonaire (1 patient), l'immunohistochimie (IHC) sur LBA (1 patient) et la coloration au Giemsa du liquide pleural (1 patient). L'imagerie pulmonaire peut montrer des infiltrats ou des nodules unilatéraux ou bilatéraux, associés ou non à des épanchements pleuraux. L'atteinte sous-pleurale est fréquente. Le traitement de choix est la pénicilline.
Conclusion. — L'atteinte syphilitique pulmonaire doit être évoquée devant des symptômes respiratoires ou des modifications radiologiques lors d'une syphilis secondaire. L'IHC, les colorations spéciales ou la PCR sur le LBA, le liquide pleural ou le tissu pulmonaire sont utiles pour l'identification du tréponème.

Introduction

Syphilis is a sexually transmitted infection that causes lesions on the skin and mucosa and may affect various other organs during its secondary and tertiary stages. Herein we report a case of pulmonary involvement, which is fairly rare in secondary syphilis, and we present a review of the literature involving cases of secondary syphilis with pulmonary involvement published in the main European languages, indicating the presenting clinical and radiological signs, together with the treatment given.

Patients and methods

A 69-year-old heterosexual male patient was admitted to the haematology department for rapidly progressing pancytopenia associated with dyspnoea and a productive cough, as well as pruritic exanthema present for around 2 months. He had a history of right nephrectomy for renal carcinoma and chronic Philadelphia chromosome-positive myeloid leukaemia treated with dasatinib. The clinical examination revealed copper-coloured palmar macules surrounded with a thin desquamative border, plantar keratoderma, and squamous copper-coloured erythematous papules and plaques on the trunk and extremities (Fig. 1). Pulmonary auscultation revealed bilateral rale. When questioned about his sexual practices, the patient reported unprotected extramarital relations. The strong suspicion of secondary syphilis was confirmed by the positive serology (RPR 1/16, TPHA 1/1280, presence of anti-*Treponema pallidum* IgG and IgM). Screening for other associated sexually transmitted diseases (serology for HIV, hepatitis C and hepatitis B, PCR chlamydia and gonococci in urine) was negative, aside from a serological scar from hepatitis B that had healed in the past.

Haemoglobin and platelet counts were low, and respectively 5.7 g/dl and 24×10^9/l. Parvovirus serology and screening for antinuclear and anti-cytoplasmic antibodies in neutrophils were negative. PCR for EBV and a

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