Forestier's Disease in a Young Student: A Genetic Origin?

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Abstract: Forestier's disease or ankylosing hyperostosis is a non inflammatory esthesopathy that ossifying the anterolateral spine face and sparing the disc and joint space. It is often occurred in elderly men over 50 years old. We aimed to report an early onset Forestier's Disease in a 20- year –old student. He was admitted for walking trouble, decline hearing and speech disturbance that began progressively four years ago. The neurological examination let appear walking ataxia, slight amyotrophy of both legs and deep sensibility impairment. Somatic exam has revealed the outgrowth bones areas. Ophthalmic examination has noted decreased visual acuity less than $4/10^{th}$ in both eyes. The audiogram has showed bilateral decline in hearing. X-ray showed an anterior weaving hyperostosis in spine, multiple new bones formation in joints of skull, mandible, scapula, humerus and knees.

Keywords: Forestier's disease, skeletal hyperostosis, ataxia.

INTRODUCTION

Forestier's disease (FD) is a non- inflammatory esthesopathy that ossifying the anterolateral spine face and sparing the disc and joint spaces. It affected with preference men over 50 years old [1]. It was first described by Forestier and Rotes-Querol in 1950 and the etiology remained unknown [2]. Genetic origin was evocated in several prior studies but none proofed [3, 4]. It is associated to diabetes in 13 to 32% of cases [5]. Subjects with FD are often asymptomatic but sometimes may complained of spinal stiffness, joints pain or swallowing disorder. The diagnosis is made by X-ray of bone. The treatment is symptomatic and surgery is indicated in case of severe dysphagia [6]. We aimed to report an early onset FD in teenage student.

CASE OBSERVATION

A 20 - year-old student boy was admitted to our unit. He had a maternal family history of gait disturbances concerning several generations. He complained for walking troubles and speech disturbances that began progressively four years ago. He swallowed with difficult. He had a sight trouble and decline hearing that appear progressively since two years. Knees joints and cervical, dorsal and lumbar spine pains were noted. His blood pressure was normal and no fever. He weighed 68 kg with a size of 175 centimeters. Neurological exam was performed and let appear walking disturbance, slight amyotrophy of both legs, and deep sensibility impairment. The tendon reflexes were very keen. Somatic exam revealed the outgrowth bones areas. Ophthalmic examination has noted decreased visual acuity less than $4/10^{th}$ in both eyes. The audiogram has revealed bilateral decline in hearing. All blood routine analyses were normal. X-ray showed an anterior weaving hyperostosis in spine, multiple new bones formation in joints of skull, mandible, scapula, humerus and knees. We concluded to a clinical neuromyelopathy as a complication of probable familial ankylosing hyperostosis disease. He received symptomatic treatment with speech and walk therapy. In one year of follow up he has got a clinically stable condition.

DISCUSSION

The Forestier's disease was often described in men over 50 years old. Its incidence grows with age [2]. There are one to six cases reported in the literature by each author in different part of the world since the first description reported by Forestier *et al*. [2, 7, 8]. The FD often asymptomatic, is mainly characterized by swallowing disturbance, ankylosing and hyperostosis of the spine [3, 7, 8]. Stiffness, pain and swallowing troubles can be the result of the mechanical compressing of nerves root and trunk in the spinal cord and brainstem. Some authors had reported the link with gouty, diabetes or over weight as the risk factors [7-9]. In the search of the aetiology its appears that FD may have a familial distribution related to antigen HLA [4, 5].

Our patient is a young student of 20 years old. His mainly complains were marked by walk disturbance, decline in hearing, seeing, talking and swallowing that appeared progressively. These symptoms are not been

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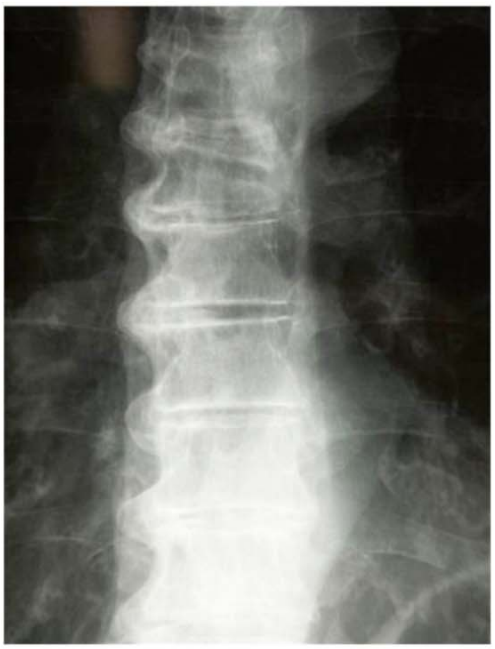
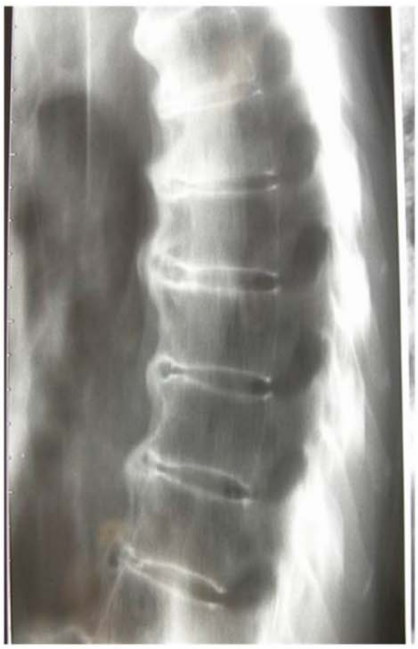
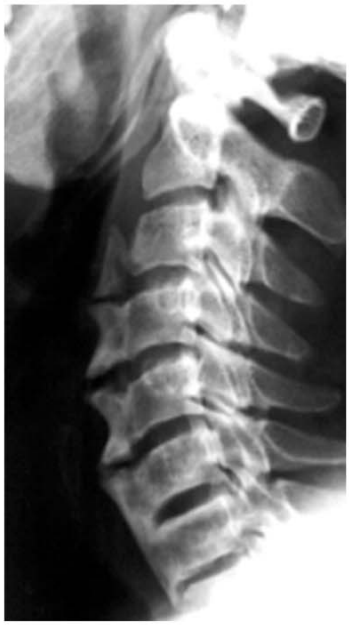


A: Anterior weaving hyperostosis in lumbar spine



B: The ossification of the posterior longitudinal ligament (OPLL)



C: Hyperostosis of cervical spine

Figure 1: A: Anterior weaving hyperostosis in lumbar spine. **B**: The ossification of the posterior longitudinal ligament (OPLL). **C**: Anterior hyperostosis of the cervical spine.

reported in previous studies. Another key point of this observation is the teenage of the patient. We suggested a genetic origin of the FD in our reported patient because of the early age of onset and the maternal family history of gait disturbance that appeared in their elderly age.

In conclusion, many cases of FD are asymptomatic and remained unreported. Solely, the rare cases with

mechanical complications and peripheral neuropathy are been reported in the literature. Its aetiology remains to be known for Appropriate treatment and prevention.

REFERENCES

[1] Resnick D, Niwayama G. Radiographic and pathologic features of spinal involvement in diffuse idiopathic skeletal hyperostosis (DISH). Radiology 1976; 119: 559-68.

[2] Forestier J, Rotes-Querol J. Senile ankylosing hyperostosis of the spine. Ann Rheum. 1950; 9: 321-30. http://dx.doi.org/10.1136/ard.9.4.321

[3] Perry JD, Wolf H, Festenstein H, Storey GO. Ankylosing hyperostosis: a study of HLA A, B,and C antigens. Ann Rheum Diseases 1979; 38: 72-3. http://dx.doi.org/10.1136/ard.38.1.72

[4] Shapiro RF, Utsinger PD, Weisner KB, Resnick D, Bryan BL, Castles JJ. The association of HLA B27 with Forestier's disease (vertebral ankylosing hyperostosis). J Rheumatol 1976; 3: 4-8.

[5] Hariga I, Mbarek Ch, Ouni H, *et al*. Maladie de forestier révélée par une dysphagie a propos de deux cas. J.Tun Orl. 2007; 18: 55-7.

[6] Matgé G. Radiculopathie cervicale au cours de la maladie de Forestier : Traitement chirurgical. A propos d'un cas et revue de la littérature. Neurochir 2005; 51: 15-8. http://dx.doi.org/10.1016/S0028-3770(05)83415-0

[7] Aydin E, Akodogan V, Akkuzu B. Six cases of Forestier syndrome, a rare case of dysphagia. Acta Otolaryngol 2006; 126(7): 775-8. http://dx.doi.org/10.1080/00016480500504192

[8] Dioré K, Facon D, Marsot-Dupuch K. Une cause de dysphagie méconnue: la maladie de Forestier. J Fr Orl 2005; 88: 124-7.

[9] Squadrito G, Reale F, D'Agostino G. Combined diagnostic imaging in a patient with Forestier's disease and dysphagia. Rays 2005; 30(3): 251-5.

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