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Ehlers-Danlos Syndrome (EDS), an Hereditary, Frequent and Disabling Disease, Victim of Iatrogenia due to Widespread Ignorance

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ABSTRACT: *Our experience of the EDS disease is based on a cohort of 2300 cases. First descriptions of Dermatologists (Tschernogobow, Ehlers, Danlos, Miget) have strongly oriented the diagnosis on two signs: joint hypermobility and skin stretchability. Therefore hiding other clinical expressions with a much more severe impact on the life of the patients: proprioceptive disorders, dysautonomia, disorders of the sensorial functions, hemorrhages, cognitive alterations, psychopathological manifestations. Despite its high level of prevalence, the EDS is still largely unnoticed by physicians. The delay for diagnosing an EDS case is in 21 years. The most frequent forms don't have a genetic identification. The absence of diagnosis is at the root of a chaotic medical process with a medical drifting from specialist to specialist. Among social consequences we find dropping out of school and exclusion from work and social life. In lack of diagnosis, these patients are also excluded from new forms of emerging treatments (orthesis, oxygen therapy, local proprioceptive pains treatments, adapted physical therapy...) and often victims of iatrogenia.*

"Listen to your patient; he will give his diagnosis" (Sir William Osler).

Keywords: *Ehlers-Danlos syndrome, Hypermobility syndrome, disability, Iatrogenia, hereditary disease, rare disease*

Our experience of the EDS (Hamonet, 2012) disease is based on a cohort of 2300 cases (children and adults with 80% female cases), collected between 1988 and 2015. All these patients have been selected according to the criteria of the international scientific community evidencing signs of fragility of their skin and other connecting tissues, including joint hypermobility, together with various joint disorders connected to proprioceptive deficiencies. They are treated with new and original therapies (Hamonet, 2015) such as oxygen therapy, proprioceptive orthesis including specific compressive garments (Hamonet, 2014).

A Twisted Clinical Description Dating back from the History of this Disease

The EDS disease has been identified based on three descriptions made by three dermatologists, Tschernogobow (Moscow, 1892), Ehlers (Copenhagen, 1900) and Danlos (Paris, 1908). The current name originates from Miget (Paris, 1933) who was the first in his medicine thesis to link two of these precursors to name the disease. These first descriptions have strongly oriented the diagnosis of this disease on two signs; joint hypermobility (Grahame, Bird, & Child, 2000; Beighton & Horan, 1969) and skin stretchability. Since then, in current medical practice, diagnosis of this pathology will be almost exclusively based on these two signs, often without important functional consequences (actually hypermobility often allows for notable physical performances for children and teenagers), therefore hiding other clinical expressions with a much more severe impact on the life of the patients, including various disabling situations.

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Symptoms Evidencing the Severity of this Disease have been Ignored

The severity of this disease and its best diagnostically signs are:

- Proprioceptive disorders sometimes responsible for very severe difficulties of motor control (pseudo palsies), widespread, acute pain, resisting to "*pains killers*", important breathing difficulties.
- Dysautonomia (Bravo, Sanhueza, & Hakim, 2012) with instable blood pressure (mainly hypotension), thermoregulation and vessels motricity disorders, tachycardia crisis, considerable fatigue, digestive and bladder dysfunctions.
- Disorders of the sensorial functions blurring the perception of external environment.
- Hemorrhages.
- Totally unnoticed cognitive alterations (memory, attention, orientation), likely a secondary effect of the dysfunction of proprioceptive function (acting almost as a sixth sense) complete, together with some psychopathological manifestations, a framework of multiple functional disorders.

Despite its high level of prevalence, the EDS is still largely unnoticed by physicians. Most of them connect the syndrome with their own field of specialization, i.e. rheumatology (fibromyalgia, spondyloarthritis, arthrosis), neurology (multisclerosis), respiratory diseases (asthma) and, in particular, psychiatry (depression, bipolar state, though there is a link between EDS and autism). Cases of autism with clinical signs of EDS have been observed in a same family. The absence of easy to use genetic tests confounds physicians in their identification of EDS as they lack confidence in clinical practice, mostly based on the subjectivity of the patient. Patient subjectivity

is today not taken into consideration by a medicine which prefers objective testing such as medical imaging or biological testing. Geneticists themselves who are often involved in diagnosing this hereditary disease will typically restrict their answer to a "*possibility or likelihood of EDS, in absence of a genetic test available"*. In fact, geneticists use a classification (Beighton, 1998) based on a correlation between a group of clinical signs and a genetic mutation of one the 29 known collagens. This classification is difficult to use (Tinkle, 2009) since the most frequent forms (qualified as hypermobile) don't have a genetic identification and when in presence of a genetic mutation (COL3A1, for example) the probability of the diagnosis for EDS-vascular is around 60% (Perdu, 2006). Geneticists therefore base their diagnosis on the clinical test of hypermobility of which the objectivity is random in a pathology influenced by muscles and tendonitis pains, aging effects (joint mobility decrease with age), hormonal levels (80% of our patients are female) and muscles retractions (Hamonet & Brock, 2015). Furthermore this hypermobility may lack in real EDS cases. This declared uncertainty of geneticists is very damageable to patients, physicians, health insurances and Social Assistance Institutions, which often refuse to support patients, depriving them from necessary medical and social resources. In a recent example (a divorce case) in which I have been involved as forensic expert, this absence of a clear answer from geneticists was impossible to accept legally for a judge. In fact she asked me to declare the diagnosis for the mother and her two children, all of them EDS patients in order to conclude the case.

The delay for diagnosing an EDS case is in average 21 years (Hamonet et al., 2012). The absence of diagnosis is at the root of a chaotic medical process with a heavy impact on families and patients, with a medical drifting from specialist to specialist, a constant challenge of the sincerity of patients from physicians unable to receive valuable clues from medical imaging or biological test despite severe symptoms. The Münchausen syndrome or even hysteria have been used in several conclusions from physicians. The patient is led to doubt of his own mental health, and so is its family. The proposed treatments, in particular anti depressives, only worsen the symptoms and surgical interventions (up to 46 in one of our cases) cause irreversible damages leading to rarely seen intense disabling situations. Among social consequences we find dropping out of school and exclusion from work and social life. In a few words, a patient with EDS is driven from a situation of discomfort to a situation of heavy disability. In addition, these patients are excluded from new forms of emerging treatments (Castori et al., 2012; Tinkle et al., 2009), relying on the strengthening of proprioceptive function (orthesis, physical therapy, balneotherapy, occupational therapy, relaxation), psychotherapy of pains, hypnosis, respiratory rehabilitation, intrapulmonary percussive ventilation with impulsator HC percussionnaire of Forrest Morton Bird, local treatment of pain (Lidocaïne), electric stimulations (TENS). As for dysautonomia we have beta blockers, oxygen therapy, medical councils for adaptation of life style, treatments for digestive disorders, and for bladder dysfunctions, rehabilitation of memory and attention disorders.

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