

When vertigo and postural instability may be linked to eyes

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"Life shapes us" every day of our life, but also "misshapes us", depending on the event that we do not accept: traumas, stresses, diseases, sorrows, pains, working activities with wrong positions, extreme sports, and so on.

So, our body, our posture, which reflects what we are and what we have lived, misshapes us, adapting to the situations.

Posture may be modified also by internal disturbing elements, apart from external ones. For instance, we know that **unpleasant emotions, anxieties and sorrows may affect some parts of the nervous central system creating serious problems and diseases.**

Even our vestibule, teeth, temporomandibular joint and eyes are able to create postural changes and vertigo, if they suffered from any disturbance.

Usually if we talk about vertigo, we link them to the inner ear's labyrinth. However, vertigo and postural instability may have several causes (inflammatory, viral, traumatic, neoplastic, and so on) and usually therapies are on a pharmacological base.

Fortunately, youngsters do not suffer a lot from labyrinth problems. These are indeed very common among older people and there is also a high percentage of young people and adults suffering from **episodes of vertigos associated to sickness and headache, not coming from the ear but from the visual system.**

Actually, do not forget that eyes provide the brain with more than two thirds of sensory information coming from outside. It is well-known for a long time that the visual system, together with the vestibular system, considerably helps to create the vertical sense and so to produce our body balance and coordination. When some visual processes do not run well, visual information reaches the brain with a certain difference compared to vestibular information, damaging verticality and stability.

Clinical and experimental research already documented the role of the visual system providing episodes of vertigo. It is **only less than two decades that a possibility to avoid those symptoms through visual rehabilitation has been experimented**, thanks to visual exercises, drugless therapies and avoiding any

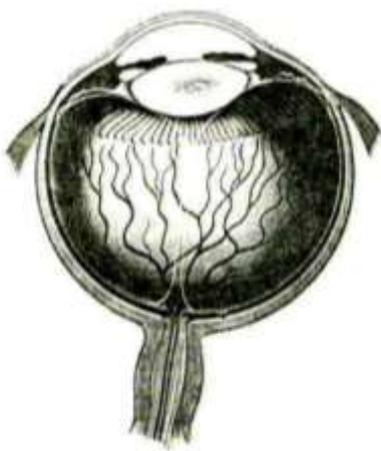
other invasive method. A real visual exercise has been improved for the first time during the second half of the '70s by Dr. Gillilan, who successfully treated hundreds of patients.

Gillilan named the vertigo disorder SSS (See Sickness Syndrome) and showed that he could remove or at least lighten vertigo symptoms with 2-4 months of rehabilitation.

A few years ago the SSS rehabilitation was introduced in Italy by Dr. Vittorio Roncagli from Cervia (Ravenna), who, following Gillilan's guidelines, improved both the diagnostic and the rehabilitating strategy. After more than five years of hard work, with almost two hundred patients treated and a new rehabilitating and diagnostic protocol defined, it is now possible to intervene by selecting earlier only the patients who can actually benefit from visual rehabilitation.

Of course, this is a great help to people prone to vertigo and whose causes still remain unknown. After undergoing several visual tests, people can actually know earlier the effectiveness of rehabilitation and, if necessary, they can remove or considerably reduce those symptoms without any pharmacological treatment. Today there are no precise statistics in Italy about the incidence of SSS. What we know, also thanks to American statistics, is that SSS affects 20% of teenagers and adults, three quarters of which are women.

A syndrome originating from functional factors



"Contrary to many other syndromes, SSS is not caused by pathological conditions, but by inefficiencies in some processes inside the visual system. Many people suffering from SSS from a long time – points out Doctor Roncagli – usually come to the optometrist having already experienced a set of very sophisticated medical specialist examinations (e.g. CAT, MRI, RX) with negative results. If this syndrome reaches high levels, it is usually accompanied by an anxious and apprehensive behavior; as a consequence, many people turn out to use anxiolytic medications and tranquilizers".

How to recognize this syndrome

SSS presents many typical symptoms, usually completely different to labyrinthitis' ones. Dr. Roncagli explained: "SSS vertigo's symptoms are triggered by images or visual situations where the vestibular system is stimulated at a minimum level. It is the case of people suffering from nausea or vertigo when observing objects moving, rotating (e.g. fun fairs, colored discs), swinging (e.g. pendulums, hanging objects) or moving rapidly and causing quick variations of the image or light (e.g. running trains, cars, cinema's movies).

It is clear that SSS is not caused by anomalous positions of the body (precarious balances) or by sudden movements of the body (such as getting on a merry-go-round), but by a comfortable and stable position of the body and by a visual perception of rapid movements.

The reason of all this is to be searched in the different neurological correlations existing between visual and vestibular systems. Some nerve endings coming out of the eyes and their correlated muscles are connected with the nerve endings directly involved in body balance and posture. Normally, when we turn rapidly our head or our eyes, there is a compensating process that helps keeping our sense of balance unchanged. It is possible that some inefficiencies, especially charged on our oculomotor muscles, could make it inefficient for those compensating mechanisms to work, so that the patient could perceive instability or vertigo simple observing objects moving at a certain speed".

Measuring our sight is not enough

It is important to say that the presence of SSS is not related to any sight's defect (myopia, hypermetropia, astigmatism), and this is why typical sight measuring is not enough to highlight the problem. What is necessary, indeed, is a functional vision test, i.e. a set of visual tests aimed at measuring the efficiency of the different main mechanisms involved in visual perception (e.g. accommodative flexibility, convergence, fusional reserves, stereopsis, oculomotricity, binocular coordination). With a correct interpretation of the results it is possible to fetch out a series of concomitant factors producing vertigos symptomatology, i.e. the See Sickness Syndrome.

Most frequent symptoms and how to manage them

If you happen to feel the following symptoms (the most frequent ones), you probably have a certain predisposition for SSS. If instead you notice to have most of them, you could already have the functional conditions typifying SSS. The characteristics of SSS symptoms are the exclusion of a vestibular problem, i.e. labyrinth dysfunctions of the inner ear, and the negative results of any kind of medical tests (e.g. blood exams, radiographies).

Here you find the most frequent symptoms:

* Inability to read in a car without nausea, even on straight paths.

Nausea considerably increases sitting in the back seats.

Almost immediate nausea looking through the rear mirror.

Nausea episodes on boat, though without rough sea. Usually reduces or disappears assuming a supine posture.

Nausea gets worse inside the boat rather than outside.

* Vertigo, nausea or instability when staring at rotating objects, such as rides. It is interesting to notice that the simple observation of rotating rides, also without riding them, is enough to cause vertigo.

* Excessive sensitivity to light. It is often necessary to use dark glasses even when there is no sun at all. The disease occurs also with artificial sources of light, such as cars lights or public places internal illumination.

* Inability to stay in high places without vertigo, nausea or instability. This latter may occur also going downstairs rapidly.

* Inability to sit close to a cinema screen without nausea, strong headache or vertigos. Nausea increases if watching very quick and dynamic scenes (e.g. car chases, planes)

These symptoms may show up even observing a running train.

* Inability to turn the head quickly without feeling instability, vertigos or nausea.

Sometimes nausea shows up by simply keeping the eyes rotated towards an extremity for some seconds. Having noticed many of the listed symptoms, the advice is to address a specialist to undertake a vestibular exam and, if necessary, extend the investigation to other aspects, to prevent other pathologies or inflammations. If the exams are negative, it is advisable to undertake a functional visual exam to make sure SSS is absent and get instructions on a visual rehabilitating program.



I personally could verify that some of the highlighted symptoms were caused by bad conditions of the cervical discs (e.g. strong tension to the neck, inflammations, arthrosis, discopathy, radiculopathy). The connection between symptoms and cervical pathologies was proved by the fact that, after a few posturological visits the symptoms reduced and in many cases completely and permanently disappeared. So, going back to what we said at the beginning, it is important to verify the specific origin of vertigo and postural instability of each patient. In order to treat them successfully, it is necessary to identify the real trigger among all possibilities.

What is the logic followed by the prior mentioned results? The fact that not only visual problems can determine a postural instability, but even postural alterations, originated by traumas or else, may create the premises for visual troubles.

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