

VASOVAGAL (FAINT)



“Arm of the Seine near Giverny at Sunrise” oil on canvas, 1896-97, Claude Monet.

“My eyes were finally opened and I understood nature...”

Claude Monet

Claude Monet was a rebellious child. He detested school and would run away from it at every opportunity, feeling as if it were some kind of suffocating prison. He much preferred the open outdoors and would escape to the cliffs and beaches around Le Havre whenever he could. Nonetheless it was at school that he first learnt to draw and it quickly became apparent that he was very gifted indeed. He had an exceptional talent for caricature. By

the time he was 15 years old he was widely admired in Le Harve and had already begun receiving substantial commissions. He seemed destined to become one of the great cartoonists of the age. But this never happened. In 1856 he would meet an older artist a certain Eugene Boudin, who would change the course of his life forever. Boudin had noticed young Claude's sketches displayed in a framemaker's window, and was immediately taken with his work. However he thought that Claude was wasting his undoubted efforts on works of mere caricature. No, Claude could do much better than that, he thought. Boudin loved being close to nature and painting outdoor scenes. He repeatedly implored Claude to come and accompany him on his painting trips around Le Harve. Reticent at first, Claude finally accepted the older man's invitations, in the summer of 1856. The result would be akin to an almost religious epiphany. Later he would write, "My eyes were finally opened and I understood nature; I learnt at the same time to love it".

From Boudin, Monet would take two principles that would revolutionize the way in which he saw the world, and the way in which he would approach his art. The first of these was to "always trust to your first impression", this Boudin assured him would always be the most powerful and the most true. Monet explained that the second was that "whatever is painted directly on the spot always has strength, a power, a vividness of touch that can never be recaptured in the studio". In a technical sense this latter point, was very much a break with traditional thinking. Even the most arduous open-air landscapists of the time would construct the outlines and skeleton of their work outdoors, but then quickly retire to the inner sanctums of their studios to complete their works or even transfer them to a completely new canvas. Monet was sold on the idea of remaining outdoors to complete, or virtually complete his works of nature. By so doing he remained in constant touch with nature at all times, as well as being true to it. He would capture it not in a static way, but rather in a dynamic way, often painting and repeating the same scene over and over at different times of the day, so capturing nature's ever changing shades and hues. This is particularly seen of course in his famous series of Haystacks. "I had seen what painting could be simply by the example of this painter working with such independence at the art he loved. My destiny as a painter was decided", he wrote. And indeed Monet's own independence of nature, born perhaps from his truant days as a schoolboy, would develop the first of Boudin's principles in a way that would revolutionize not only his own work, but that of the entire Art world of the mid-Nineteenth century. This revolution would become known as "impressionism".

The beauty of Medicine resides not only in the wonders of its Science; it resides also very much in its Art. Nowhere is this seen more than in the common situation of the "clinical diagnosis". While evidence clearly guides the science of medicine, the guiding principles of its "art" are much more ephemeral. Whether whispered on the wind or written on water, as Catullus would have it, it is very much born of personal experience. When we diagnose a case of the ubiquitous "vasovagal" reaction - science cannot help us with a definitive "test". Instead we can perhaps utilize the two great principles of Claude Monet - our first "impression" of the case will usually be correct, based on the previous experience we have as clinicians. But the most important aspect of forming our impression will not come from the detached inner sanctum of a hospital laboratory, but rather it must come from directly observed nature - in this case the eye witness report of a reliable observer.

VASOVAGAL (FAINT)

Introduction

The term “**vasovagal**” is imprecisely defined and often loosely applied.

It is a **clinical diagnosis**.

In general it refers to a simple “**faint**” meaning a **syncopal episode** that is due to a **benign physiological** reaction. This is in distinction to syncope that is the result of a **pathological** condition.

Syncope caused by a pathological condition, should not be termed a simple “faint” or “vasovagal”.

A number of variants are recognized, but essentially all fall into two categories:

- Excessive vagal tone.
- Physiological (as opposed to pathological) reductions in venous return.

The assessment of patients will predominantly be aimed at excluding other *potentially serious pathological* causes of a syncopal episode, as well as excluding any secondary trauma.

The diagnosis can usually be made on a good history and examination without the need for extensive investigation. A direct eye witness of the event is most helpful in this regard.

Vasovagal syncope is usually harmless providing there is no secondary trauma associated with the event.

The following refers to “fainting” in the benign physiological sense

See also separate document on Syncope (in Clinical Presentations folder)

Pathophysiology

Essentially vasovagal syncope is the result of a lack of blood sufficient flow to the brainstem/ cerebral hemispheres.

Precipitating events fall into two groups:

1. Excessive vagal tone:

Here there is **bradycardia** in association with **hypotension**.

The reaction is centrally mediated by and may be induced by:

- Strong emotional responses:
 - ♥ Fear
 - ♥ Anxiety
 - ♥ Unexpected fright or “shock” (in the lay emotional sense).
 - ♥♥ Commonly this will be the sight of blood/physical injury
- Acute painful stimulus:
 - ♥ In medical settings this will very commonly be due to venepuncture.
- Nausea/ vomiting:
 - ♥ Strong reactions can be associated with clinically significant bradycardia

2. Physiological reductions in venous return:

- Prolonged standing:
 - ♥ Venous pooling:

Particularly in warm/hot weather - this needs to be distinguished however from *pathological syncope* due to heat exhaustion or heat stroke.
- Abrupt upright posture (i.e sitting or lying to standing).
- Strong valsalva manoeuvre (of any cause, e.g. cough, micturition, heavy lifting/ straining).

Clinical features

An essential aspect of the assessment and ultimate diagnosis of a vasovagal reaction is, as with any syncopal episode in general, a clear history from a **direct eye witness** of the event.

Every effort should be made to obtain this history.

Patients may have a history of sporadic previous faints, but if episodes are frequent, then an underlying pathology needs to be considered.

Ensure that the patient does not have any “red flag” symptoms or risk factors for pathological syncope (see Syncope Document).

Use caution when assessing the elderly. They are much more likely to have a pathological cause for syncope than are younger patients.

The major concern in cases of vasovagal reactions is **secondary trauma**, particularly of the head and neck. Patients should be carefully assessed for this along standard lines.

The typical features of a vasovagal faint include:

1. History of a clear precipitating event.
2. There may be sensory premonitions, in the form of:
 - Visual disturbances:
 - ♥ Ranging from variable scotomas to complete loss of vision.
 - Auditory disturbances:
 - ♥ Deafness
 - ♥ Tinnitus
 - Heightened anxiety and restlessness
 - Sensation of “dizziness” / “light headedness”
 - Sensation of nausea
 - Sensation of overall “clamminess” or alternatively “warmth”.
3. Collapse or “slumping”.
4. Loss of consciousness or vagueness or "non-responsiveness":
 - This is **brief**, lasting seconds to minutes only.
5. Prompt resolution of symptoms, once in the supine position
6. Clinical features that may be noted by witnesses include:
 - Patient becomes pale/ sweaty
 - Bradycardia during the episode (weak or “thready”, slow pulse)
 - Dilated pupils
 - Minor and brief **myclonic jerking movements of the limbs** may be noted, (these are not true seizures)

In some cases however there will be little or no warning symptoms.

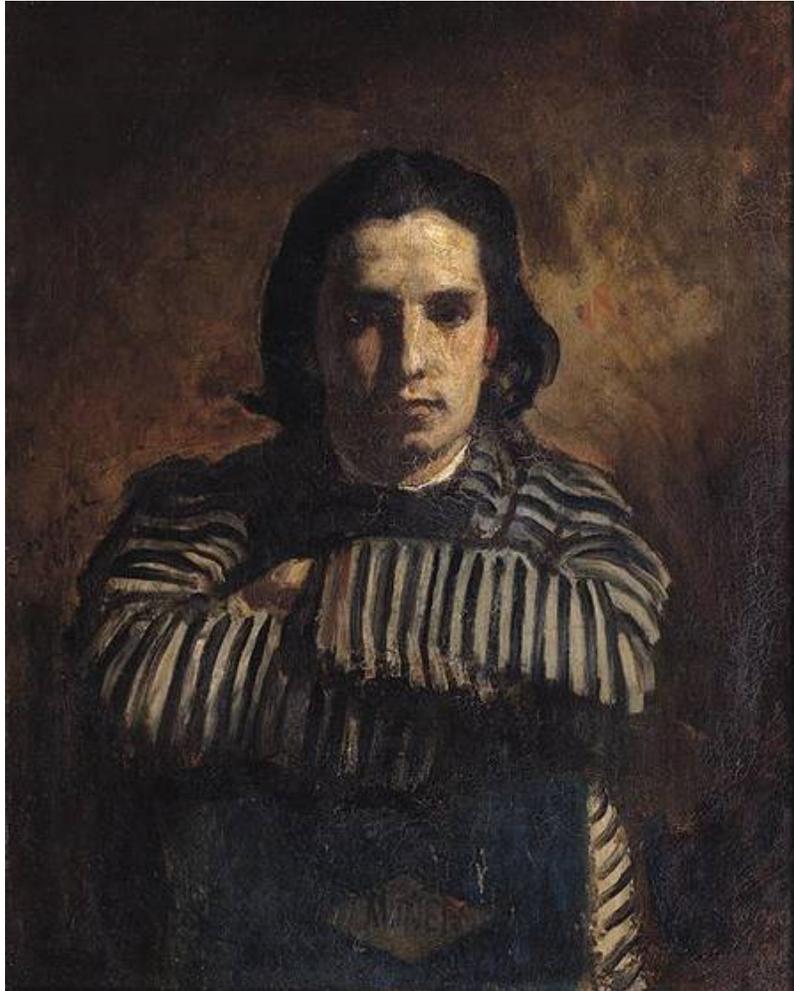
Investigations

None will be necessary in clear cut situations, but when the situation is less clear, especially when no reliable history is obtainable, then investigation will be necessary to rule out other possible more serious pathology

For those who present to the ED for assessment, **ECG, BSL**, and **pulse oximetry** are reasonable screening investigations.

Management

1. Lie the patient supine or if sitting get them to place the head down, (to at least the level of the heart).
 - The legs can also be elevated to improve venous return, and hence cardiac output.
 - Fainting can be avoided if a head down or supine posture is adopted quickly enough, at the first sign of typical symptoms or impending collapse.
2. Discourage patient from a natural inclination to want to sit up /stand up again too quickly, as this may rapidly result in a recurrence of symptoms.
 - The patient should remain supine for at around 10 minutes or more.
3. Strong **reassurance** and **reorientation** to the patient is required in witnessed events.
4. Assess for and treat any associated **physical injuries**.



*Portrait of a young Claude Monet, oil on canvas, 1865 Gilbert Alexandre de Severac,
Musée Marmottan, Paris.*

Dr J. Hayes
Reviewed September 2017