THE NORTHERN HOSPITAL

PANIC ATTACK - PANIC DISORDER

"M-Maybe" oil and magna on canvas 1965, Roy Lichtenstein,
Museum Ludwig, Cologne.

"We felt none of the dislike of commercial culture standard among most intellectuals, but merely accepted it as fact, discussed it in detail, and consumed it enthusiastically".

Lawrence Alloway

"Popular, transient, expendable, low-cost, mass produced, young, witty, sexy, gimmicky, glamorous…big business!"

Richard Hamilton

Pop art emerged in the late 1950s and flourished mightily in the 1960s. As history has shown over and over, avant-garde movements often arise from a protest or reaction against prevailing norms. In the case of Pop Art we see a strong, almost violent reaction against the unfathomable and elitist pretentions of abstract expressionism then at its apogee. Art needed to reconnect with the ordinary people, and in particular with the young generation. The post war period ushered in a new age of mass media led by television and popular magazines, fueled by unprecedented and relentless advertising on the industrial scale that fed the voracious appetite of an emerging age of mass consumerism. This new age was totally alien to the grim generation that lived through the Great Depression and that had fought the Second World War, but the children of that generation had no memory of those times. Many Artists were naturally employed by the new advertising industry. A new species of "commercial Artists" had evolved, that believed that Art could have a legitimate basis in popular culture and that the simple images of this new Art could have powerful influence in the collective psyche of the "masses".

The commercial Artists, prospered, but they were not seen real or legitimate Artists. Some however, such as Andy Warhol and Roy Lichtenstein began to see their commercial designs as not merely the popular slogans of advertising companies, but rather a new Art form in their own right. They began to produce images, apart from any advertising purpose, that had an instant and widely recognized resonance with young people.. Suddenly an everyday object, such as a simple can of Campbell's tomato soup became a work of Art in its own right. Pop Art provided a universal language of the age of mass consumerism. It had no one specific process or methodology, rather each individual artist approached his or her work entirely independently. Andy Warhol, took a can of tomato soup and turned it into an icon of the times. The genius of Roy Lichtenstein was to take the simple images of children's and adolescent's comic books, and turn them into symbols of universal accord. He used the techniques of cropping and foreshortening to achieve vivid and strangely compelling images of faces that cleverly conveyed strong emotions, most commonly of young and beautiful women caught up in the everyday stresses of the modern world - stresses that of course in no way compared to those of the previous generation, yet accurately captured those that were now directly relevant to the experiences of a younger generation.

Lichtenstein's hallmark signature was the imitation of the commercial printing techniques that were used in everyday newspapers and comic books. He used a series of discrete ink dots in order to build up color, tone, contrast and shades in the manner of the printing press Benday dots. When you magnify old newspapers and comics you can

see the entire image is actually made up of microscopic dots, and Lichtenstein imitated this technique of the popular mass media. The concept of Benday dots was not new, the Nineteenth Century Impressionist, Seurat employed a similar technique in some of his works - as a series of tiny painted dots, known as Pointillism. By skillful placement and combinations of the tiny dots, varying shades, colours and contrasts can be built up into a recognizable macroscopic image. For those of us in the digital age of the 21st Century, a familiar comparison would be with the electronic pixels of the computer screen or digital camera.

In Lichtenstein's "M-Maybe", oil and magna on canvas 1965, we see all the hallmarks not only of his own widely recognized work, but of the genre of Pop Art in the 1960s in general. The image strikes a universal chord in the depiction of the modern day malady that appeared in lockstep with the frantic time poor, disconnected, high pressured age of consumerism we all now inhabit - neurosis or panic attack. The attractive but distressed blonde is a typical motif of Lichtenstein's adaptations of teen romance comics. She is clearly panicking over some predicament, but her image appears as a single frame of a comic strip series and so we do not know the context or the narrative of her anxiety. In consequence a certain unease is triggered in the viewer themselves. We see the foreshortening and cropping of the image which provides a close and immediate intimacy, typical of much of Lichtenstein's work. We also see the benday dots, hallmark of the mass media newspaper and comic book printing techniques of the time.

Mid-to late twentieth century psychiatry saw afflictions of the mind in terms of simple "chemical imbalances" of neurotransmitters, the Twentieth century's version of course of the old medieval concept imbalance of the "humors" In the age of mass consumerism it was no coincidence that Big Pharma arose in parallel. By the correct readjustment of these (supposed) "imbalances" all manner of mental health disorders could be addressed. Big Pharma was more than happy to oblige; so happy in fact that much of modem day psychiatry is now driven by Big Pharma itself. Some antidepressants seem to have some benefit, but there are also substantial adverse effects. Overall benefit therefore is open to some question. Simply raising global levels of various central neurotransmitters, (whose true actions remain very poorly understood), seems a very blunt instrument indeed when it comes to treatment of afflictions of something as complex as the human mind. It should be noted that the first line therapy option for some conditions such as panic disorder remains cognitive based therapies. Pharmacotherapy remains a distant second.

PANIC ATTACK - PANIC DISORDER

Introduction

A **panic attack** is defined as a discrete period of intense fear or discomfort, in which four (or more) of a defined set of symptoms develop **abruptly** and reach a peak within 10 minutes.

A single panic attack is *not* the same as panic disorder.

Panic disorder is characterised by *recurrent* panic attacks, in which the onset of the attack is not associated with a situational trigger (i.e. the attacks occur spontaneously or "out of the blue"). They *not* due to the direct physiological effects of a substance, medication, general medical condition or another psychiatric disorder.

The dramatic and paroxysmal nature of panic attacks frequently result in ED attendances.

See also separate document on Hyperventilation (in Clinical Presentations folder).

Epidemiology

Isolated panic attacks are common, occurring in around 15% of the population

Panic disorder affects 2 - 3% of the population and is 3 times more common in women than in men.

The disorder has a median age of onset of 24 years, (but has been well documented at ages between 15 - 54 years).

Pathophysiology

Risk factors:

Risk factors include:

1. Genetic factors:

    - There is some link with first-degree relatives with panic disorder.

    - Twin studies have shown higher concordance for monozygotic compared with dizygotic twins.

      Twin studies have also suggested a heritability of approximately 40% with contributions of 10% from common familial environment and greater than 50% from individual-specific environmental effects.

2. Childhood adversity:

- Childhood adversity such as a history of physical or sexual abuse increases the risk of panic disorder in adult years.

3 Some personality traits, including:

- Anxiety
- Sensitivity
- Neuroticism

Current stressful life events in association with one or more of these risk factors often precipitate the onset of panic attacks

Clinical assessment

Panic attack:

Panic attacks classically present with **spontaneous**, **discrete episodes** of **intense** fear that begin **abruptly** and last for **several minutes** to about **an hour.** [2]

A panic attack is **not** a mental disorder.

Panic attacks may occur:

- In isolation
- As part of panic disorder
- In association with other psychiatric conditions:
- Anxiety disorders
- Depressive disorders
- Post-traumatic stress disorder
- Substance use disorders
- Medical conditions.

When the presence of a panic attack is identified in conjunction with a *mental disorder other than* panic disorder, it should be noted as a specifier (e.g., "post-traumatic stress disorder with panic attacks").

Formal **DSM-5 diagnostic criteria** for **panic attack** state:

Panic attack is an **abrupt** surge (this can arise from a calm state or an anxious state), of intense fear or intense discomfort that **reaches a peak within minutes**, and during which time **4 or more** of the following 13 somatization symptoms occur:

1. Palpitations, pounding heart, or accelerated heart rate
2. Sweating
3. Trembling or shaking
4. Sensations of shortness of breath / smothering / hyperventilation.
5. Feelings of choking
6. Chest pain or discomfort
7. Nausea or abdominal distress
8. Feeling dizzy, unsteady, light-headed, or faint
9. Chills or heat sensations
10. Paresthesias (numbness or tingling sensations)
11. Derealization (feelings of unreality) or depersonalization (being detached from oneself)
12. Fear of losing control or "going crazy"
13. Fear of dying

Note that *culture-specific* symptoms (e.g. uncontrollable screaming or crying) should not count as one of the four required symptoms.

The somatic symptoms of panic disorder often predominate in patients' clinical presentations causing many to seek health care from a general medical rather than mental health clinician. The dramatic and paroxysmal nature of panic attacks frequently result in ED attendances.

Panic disorder:

In **panic disorder**, patients experience **recurrent** panic attacks, at least some of which are **not triggered or expected**, and **one month or more** of either**:**

- **Worry** about future attacks/consequences

Or

- **A significant maladaptive change in behaviour** related to the attacks, such as avoidance of precipitating circumstances.

Patients with panic attacks can develop **agoraphobia**, i.e., anxiety about and avoidance of situations where help may not be available or where it may be difficult to leave the situation in the event of developing panic-like symptoms or other incapacitating or embarrassing symptoms. With the transition from DSM-IV-TR to DSM-5, agoraphobia is now reclassified as a *separate disorder diagnosed independently of panic disorder*.

Patients may use **alcohol** or **sedative hypnotics** in attempts to control the symptoms of panic disorder.

These agents have a **short-lived** anxiolytic action, but are subsequently associated with rebound *exacerbation* of anxiety and panic attacks when ceased, thus leading to a risk of dependence. This effect may not just be short term but may result in progressive worsening of the course of panic and anxiety over time.

Formal **DSM-5 diagnostic criteria** for **panic disorder** state:

A. Recurrent unexpected panic attacks

B. At least one of the attacks has been followed by a month or more of one or both of the following:

   - Persistent concern or worry about additional panic attacks or their consequences (e.g. losing control, having a heart attack, "going crazy").

   - A significant maladaptive change in behavior related to the attacks (e.g. behaviors designed to avoid having panic attacks, such as avoidance of exercise or unfamiliar situations).

C. The disturbance is not attributable to the physiological effects of a substance (e.g. medication or illicit drug) or another medical condition (e.g. hyperthyroidism, cardiopulmonary disorders).

D. The disturbance is not better explained by another mental disorder. As examples, the panic attacks do not occur only in response to:

   - Feared social situations, as in social anxiety disorder

   - Circumscribed phobic objects or situations, as in specific phobia

   - Obsessions, as in obsessive-compulsive disorder

   - Reminders of traumatic events, as in posttraumatic stress disorder

   - Separation from attachment figures, as in separation anxiety disorder

Investigations

There are no specific investigations required in cases of suspected panic attack or panic disorder other than those required to **rule out alternative organic disease**.

Panic attacks may initially suggest an acute medical condition, e.g. heart attack, stroke, hyperthyroidism or a respiratory condition, such as asthma.

Patients presenting for the *first time* with symptoms of a panic attack, especially with a clear physical element, should be carefully evaluated for a significant physical illness.

Clinicians can be more confident of an accurate diagnosis of panic disorder with repeated presentations with multisystem symptoms after prior negative investigations.

If patients present with **changed symptoms** however, an open mind should still be kept for the possibility of an acute physical illness.

Note that patients with continuing, frightening symptoms of panic disorder are often unsatisfied following a negative general medical work-up and repeatedly seek medical care.

This often results in high medical utilization, including excess medical visits, unnecessary medications, and costly and unnecessary testing to rule out medical illness, e.g., cardiac testing for unexplained chest pain and dyspnea, pulmonary function testing for unexplained dyspnea, endoscopy for unexplained abdominal pain or diarrhea, and MRI scanning for unexplained dizziness.

This extensive use of resources often precedes the diagnosis of panic disorder, and sometimes by a period as long as 10 years. [2]

Management

Panic attack:

Patients with panic attacks should be treated with psychological interventions, rather than pharmacological ones.

Explanation, support and stress management advice are effective for some people and, where relevant, their families and close friends. This is especially important on the first presentation following a panic attack.

People experiencing hyperventilation during a panic attacks should be told of the techniques of breathing slowly and deeply.

Rebreathing into a hand-held bag placed over the mouth is now generally discouraged.

Panic disorder:

Psychological therapy:

Psychological interventions are the first-line treatment for panic disorder.

Cognitive behavioural therapies is the treatment of choice for panic disorder.

There are several versions used for panic disorder.

The most commonly used is **panic control treatment**, which involves exposure to deliberately induced symptoms, together with techniques (such as controlled slow breathing) for controlling symptoms and reattribution of symptoms to benign causes (e.g. palpitations are not due to cardiac arrest).

Pharmacotherapy:

First-line treatment for panic disorder is with psychological interventions.

When **cognitive behavioural therapy** is not available or not effective, pharmacotherapy may be used.

Pharmacotherapy for panic disorder may need to be continued for 6 - 12 months in the first instance.

After this period, the dose should be slowly reduced and, if possible, the drug stopped.

Every effort should be made to use concurrent psychological interventions to minimise the need for prolonged pharmacotherapy. The chance of successfully ceasing the drug is increased, if the patient can effectively use concurrent CBT

However, some patients may still need ongoing medication.

Agents that have demonstrated some efficacy in the treatment of panic disorder include:

1. Selective serotonin reuptake inhibitors (SSRIs)
2. Venlafaxine (an SNRI)
3. Tricyclic antidepressants (TCAs)
4. Irreversible non-selective monoamine oxidase inhibitors (MAOIs)
5. Some benzodiazepines.

The actual agent chosen will depend on a range of considerations including::

- Adverse effect profile

- General tolerability
- Presence of coexisting conditions such as depression
- History of problem alcohol or drug use, and the risk of overdose (more toxic agents such as the TCAs, MAOIs, SNRIs should be avoided).

Selective serotonin reuptake inhibitors (SSRIs):

SSRIs are currently considered first line pharmacotherapy for panic disorder.

SSRIs to reduce the frequency of panic attacks, severity of anticipatory anxiety, and the degree of phobic avoidance.

No particular agent appears to be superior over the others.

On initiation of treatment there may be a transient *increase* in anxiety, which usually resolves after several days. It is lessened with lower initial doses or, if patient distress is problematic, with short-term coadministration of a benzodiazepine.

Randomized trials have shown the following SSRIs to be effective for panic disorder compared to placebo:

- Fluoxetine
- Paroxetine
- Sertraline
- Fluvoxamine
- Citalopram
- Escitalopram

Venlafaxine (an SNRI):

Venlafaxine (an SNRI) is also currently considered a first line pharmacotherapy for panic disorder, however it is considerably more toxic than the SSRIs if taken in overdose, and so may not be the best choice for patients with a history (or likelihood) of overdosing.

For panic disorder:

- Venlafaxine controlled-release 75 mg orally, in the morning

  Increase dose according to tolerability and patient response.

The maximum daily dose is 225 mg, (i.e 3 tablets).

Tricyclic antidepressants (TCAs):

The onset of therapeutic effect of antidepressants is generally somewhere between 2 - 4 weeks, but clinical response can take up to 8 - 12 weeks for some patients

12 weeks is considered an adequate treatment trial.

As with the SSRIs, there may be a mild but self-limiting exacerbation of anxiety when the TCA is started.

The most studied agents are:

- Imipramine:
  - ♥ Imipramine 50 - 75 mg orally, at night.

    Increasing every 2 - 3 days according to tolerability and patient response to 150 mg at night.

    Maximum dose 300 mg at night.
- Clomipramine:
  - ♥ Clomipramine 50 - 75 mg orally, at night.

    Increasing every 2 - 3 days according to tolerability and patient response to 150 mg at night.

    Maximum dose 300 mg at night

Irreversible non-selective monoamine oxidase inhibitors (MAOIs):

Initiating MAOIs should generally be restricted to specialist psychiatric practice.

The patient must be able to reliably comply with drug use and the strict low-tyramine diet as well as avoid interacting drugs, especially other serotonergic antidepressants.

Some benzodiazepines:

The role of benzodiazepines in treating panic disorder has been largely replaced by the antidepressants; however, they may occasionally be used in patients who have not responded to or cannot tolerate antidepressants.

Dependence is greater at higher doses and with longer duration of treatment, and with drugs of shorter half-life with associated inter-dose anxiety and strong withdrawal phenomenon.

The benzodiazepine should be reduced slowly when ceasing

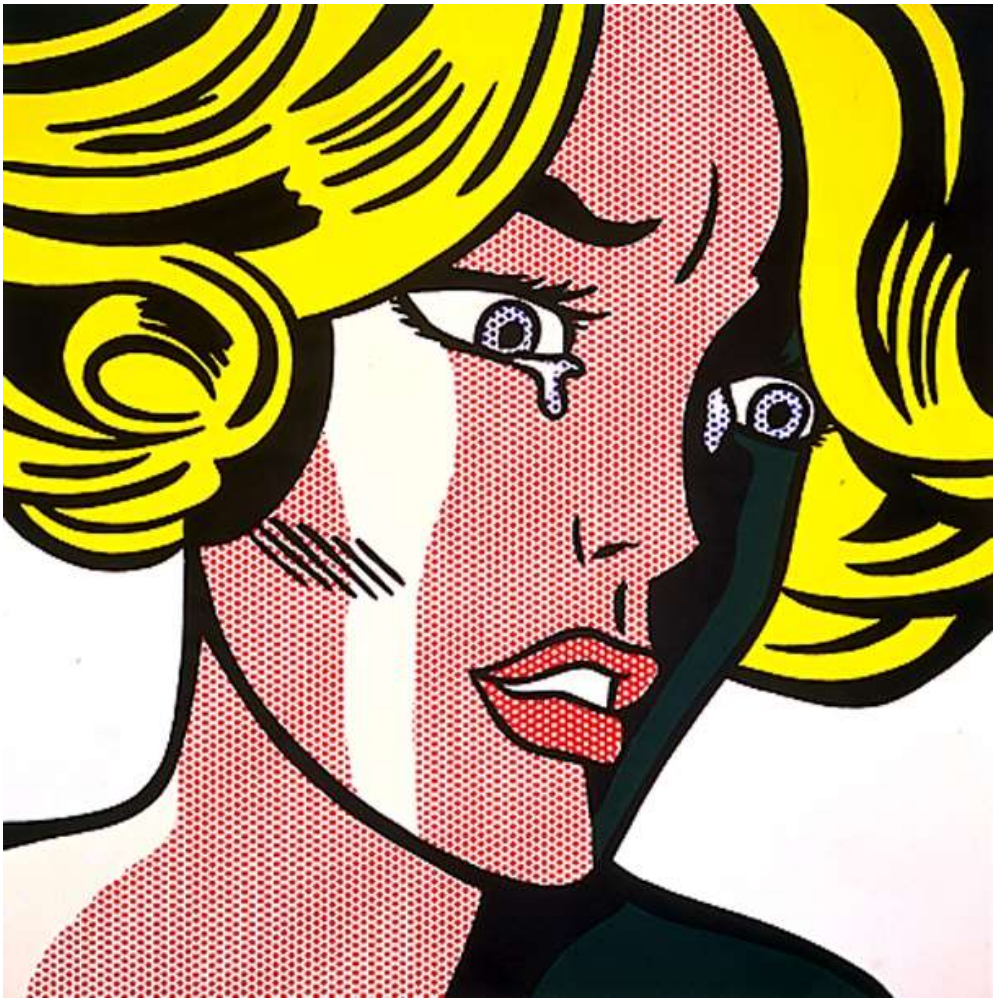
Onset of the anti-panic effects of benzodiazepines is **very rapid**, beginning within the first week of treatment. This may be a distinct advantage in **severely symptomatic** and functionally impaired patients who require **rapid relief** in order to avoid further clinical deterioration.

All agents in this class appear to be equally effective with trials showing comparability among **alprazolam, clonazepam, lorazepam,** and **diazepam.**

Disposition

Patients with significant symptoms should be referred to a **psychologist** for **cognitive behavioural therapies.**

Severe cases that fail to respond to cognitive behavioural therapies and/ or pharmacotherapy should be referred to a **psychiatrist.**



Frightened Girl, oil and magna on canvas, 1964, Roy Lichtenstein.

References

1. Panic Disorder - Panic Attack in eTG - March 2017.

2. Peter P Roy-Byrne at al. Panic Disorder - Panic Attack in Up to Date Website, March 2017.

Dr. J. Hayes
June 2017.