Mass psychogenic illness (MPI), also known as epidemic hysteria, mass hysteria and mass sociogenic illness, has been reported for centuries and from all corners of the world, and is not uncommon in the UK. Whereas in the past, episodes were attributed to witchcraft, possession and malicious poisoning, today they are often attributed to perceived exposure to chemicals or radiation, and can thus present a challenge for public health response.

What is mass psychogenic illness?
MPI can be defined as ‘widespread, subjective symptoms thought to be associated with environmental exposure to a toxic substance, in the absence of objective evidence of an environmental cause’ (Jones et al., 2000). In other words, incidents involve two or more people who share beliefs as to the cause of their symptoms, although no source can be found that adequately explains the symptoms reported.

As there is no biological basis for the symptoms experienced, symptoms reported vary between incidents, but can also vary within the epidemic, making it hard to develop a case definition. Two syndromes have been described; motor variant, where motor effects such as hysterical dancing, laughing, convulsions, pseudoseizures are more common, and anxiety variant, where symptoms may include nausea, vomiting, headaches, shortness of breath and confusion (Wessely, 1987).

The latter is more commonplace in the UK and Europe, associated with perceived toxic exposure. Two examples of mass psychogenic incidents are described in the boxes.

What causes mass psychogenic illness?
MPI incidents are by their very nature diverse, with triggers and spreading mechanisms varying between incidents. Boss (1997) reviewed reports of MPI and found the following themes to be common:
- incidents may be triggered by events, such as a real chemical exposure, but the health response to these events goes beyond what can be toxically explained
- the presence of an odour, real or perceived, can trigger incidents
- the affected group is often already under psychological stress, such as poor work conditions, exam stress or concern about a nearby chemical company or mobile phone mast
- incidents are more common in ‘closed’ communities such as schools, workplaces, factories and hospitals
- there is often an ‘index case’ from which the ‘contagion’ spreads, and spread is by ‘line of sight’, e.g. from friend to friend
- symptoms often spread from older or authoritative individuals to younger and lower-status individuals
- females are at a greater risk than males
- most incidents are short-lived, especially if in a school or workplace, but episodes in the community and family may last longer.

How common is mass psychogenic illness?
It is widely recognised that episodes of MPI are grossly underreported (Bartholomew, 2001) and there are no existing data on their frequency. This is due in part to the difficulties in recognising that an outbreak may be mass psychogenic, compounded by the...
minimal training in mass psychosis received by clinicians and health professionals. In addition, incidents go un-reported as they often spontaneously resolve with no ongoing health effects.

As part of a study between Chemical Hazards and Poisons Division (CHaPD) and the Institute of Psychiatry (Page and Wessely, 2005), a random selection of incidents reported routinely to CHaPD were analysed and 4.6 per cent (13/280) were classified as ‘probably mass psychogenic’. Most of these 13 incidents involved considerable input from CHaPD and the local Health Protection Unit, the involvement of numerous emergency services and extensive sampling and monitoring, all at great cost. One case resulted out of a school for three weeks, another the closure of a hospital Emergency Department, another the closure and evacuation of a town centre, and in others, people were decontaminated unnecessarily. The full analysis of these data is ongoing.

Most incidents of MPI are short-lived with transient symptoms; however CHaPD has been involved in longer-lasting episodes.

Recent reports of incidents involving the Health Protection Agency (HPA) have been reported in the Chemical Hazards and Poisons Report (issues 9 and 13).

How can incidents of MPI be managed?

It is worth remembering that everyone - young or old, male or female, educated or uneducated, healthy or unhealthy - can experience psychogenic illness and that although there may not be a physically measurable cause, the symptoms experienced are real.

Although there is little evidence for the treatment of MPI, the following ways to manage incidents should be considered:

• MPI is difficult to differentiate from illness caused by chemicals or rapidly spreading infection, and is often a diagnosis of exclusion; however, quick recognition of an incident as mass psychogenic will prevent further spread, reduce anxiety and protect resources
• consider involving a behavioural scientist, psychologist or psychiatrist, with experience in this area, if possible
• if you do not think that this is a toxicological incident, say so as clearly as you can; people need simple, accurate information as soon as possible; saying, however, that this is mass psychogenic illness is likely to be counter-productive – better to say ‘unexplained’, or ‘stress-related’
• remove patients from the scene and separate the ill from not ill to prevent further spread
• minimise unnecessary medical attention and stress, and the presence of emergency services; these can all enhance the problem by adding to anxiety and confirming suspicions that the situation is dangerous; observe patients using a calm and authoritative approach
• encourage return to normal activity
• try to minimise the persistence of rumours and media reports, which can trigger relapses or new cases, by giving out clear health messages; relapses may occur, especially if the episode lasts a long time.

Conclusions

Nearly five per cent of the chemical incidents reported to CHaPD are potentially psychogenic in origin. MPI incidents have the potential to be extremely resource and time-intensive. In order to reduce the psychological and financial burden of these incidents, it is important for public health practitioners to familiarise themselves with MPI.

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