# Second World War veterans with chronic post-traumatic stress disorder

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The present case study describes a typically complex clinical presentation of chronic post-traumatic stress disorder (PTSD) suffered by a Second World War veteran and advises on multi-disciplinary outpatient management extending to acute hospital care. Limited symptomatic impact of psychological and psychopharmacological therapies is discussed, and related to patient reports of satisfaction with therapeutic outcome.

#### Prevalence and presentation

In January 1997 approximately 170 000 UK Second World War veterans received a service-related disability pension, this being 7% of the male population aged 70 years and above. The population-specific prevalence of war-induced PTSD is not documented. Case-by-case morbidity is a function of each individual's particular war experiences (intensity and duration of combat, exposure to traumatic bereavements) and post-war coping strategies (Lindy, 1988; Shay, 1995). Clinicians taking histories from patients in this age group should be alert to a possible link between their current physical and psychological status and traumatic war experiences.

#### **Case study**

#### Referral details

A 71-year-old combat veteran, with a previously unremarkable medical history, was referred by his

general practitioner (GP) to a specialist PTSD clinic. The referral mentioned regular recurrent traumatic nightmares of attacks by German fighters while being pursued by dogs. Prior to referral he had driven his car into a ditch because he thought an aircraft flying overhead was going to 'shoot him up'. To help him sleep fluoxetine had been prescribed but had not been taken. The GP had not been consulted specifically about war sequelae, but had concluded that the patient would benefit from some counselling.

#### Personal history

At the first interview the patient's grief was evident when he spoke about colleagues killed in action. During his late teens he witnessed devastation and suffering caused by strategic bombing of England's industrial cities. It was then that he resolved to volunteer for active military service. During training for bomber command he was injured in a crash requiring six months' hospitalisation. Active military service comprised 30 bombing missions to Germany and on three occasions he found himself the sole survivor. On the final mission in December 1944, he was taken prisoner of war (POW) having parachuted from a burning bomber. He escaped from a POW camp, was hunted by uniformed men with dogs and killed his pursuers in hand-to-hand fighting before meeting allied invasion forces in April 1945.

Unable to settle to civilian life after demobilisation, he re-enlisted to pursue a military career, but medical discharge was effected upon developing anxiety and panic reactions that were irreconcilable with his assigned operational role. A period of employment as an administrator in a large public company ensued until he experienced an

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overwhelming flashback to a traumatic war experience after an argument with a colleague. He reported that:

"It was as if it happened again. I was in the combat zone again. After that I could not do regular work again and was given a permanent disability pension."

None the less, he stressed that he had succeeded in living an active, fulfilling life.

His wife confirmed the history given and added that they had shared an unusually eventful life in spite of limited financial means and her husband's propensity to leave jobs after short periods of employment. Often these jobs involved dangerous activities and high personal risk. To accommodate an unsettled lifestyle her husband insisted on the family showing exceptional flexibility as well as meeting his exacting standards of order and control. Prior to referral, however, he had been unable to maintain habitual levels of order and control, to which he reacted with increasing rage and despair. His wife reported recent deterioration in her husband's physical health and growing difficulties in his psychological adjustment as evidenced by: social withdrawal; being drawn to a secluded field in the countryside where he reported hearing voices of dead comrades; intense phobia of open fires; and night-time restlessness so extreme that he would fall out of bed. To reduce risk of injury he had placed mattresses round his bed to cushion the impact of falling.

#### **Formulation**

The patient's presentation conforms to diagnostic criteria for chronic PTSD with delayed onset (DSM-IV 309.81; American Psychiatric Association, 1994); all criteria (A–F) were fully met (see Box 1). He continued to respond to his intrusive memories with fear, even horror, and he could only partly mitigate this by his efforts to avoid reminders of wartime memories. His chronic hypervigilance and psychophysiological hyperarousal predicated his tolerance of environmental stressors. His precarious post-war adjustment was manifest in his significant personal distress with impaired affect modulation, poor impulse control and consequent impairment of social, occupational and family functioning. Striking features not mentioned among the diagnostic criteria of the DSM-IV but important in this patient and many others are: survivor guilt, somatic complaints, specific phobias and sensation-seeking through compulsive pursuit of danger and risk in which he seemed to re-enact his war traumas (Lindy et al, 1992).

#### Treatment plan

Outcome studies with war veteran populations indicate that the disorder is chronic with a fluctuating course over time (Op den Velde et al, 1990; Solomon, 1995). Some symptomatic change is possible by focal interventions (Greenwald, 1994). A contract of one session per week of open-ended, action-oriented treatment was agreed with the subject. Although no specific outcomes were anticipated, the patient hoped that psychological therapy would re-establish a sense of order and control in his life (see Box 1). His decision to start therapy was conditional on not being pressurised to take medication or be compulsorily admitted for psychiatric treatment.

## Summary of psychological therapy

Initially, treatment set out to link contemporaneous reactions to past experiences and develop new repertoires of coping strategies. To this effect a life review generated material amenable to psychodynamic interpretation and cognitive-behavioural treatment. Reactions to repeated traumatic bereavements were addressed pragmatically. He complied with advice to engage his dead comrades in 'imaginary dialogue' about pervasive survivor guilt, his longing for the intense bonds formed within service units, his grief at their deaths and the unrelenting miseries resulting from being alive when others perished. This adjustment strategy persisted beyond the closure of therapy, the principal benefit being normalisation of what he had previously experienced.

The distinguishing feature of every therapy session was the patient's accounts of recurrent traumatic nightmares. One was of parachuting from a burning plane, which had in fact happened to him in the war. Narratives encompassed all sensory modalities with behavioural re-enactment through jumping out of bed. These accounts and recreations lost none of their intensity on being told and re-told in therapy. By contrast, a recurrent dream of sliding and falling off a roof ceased when he could make a link to an actual but hitherto 'forgotten' childhood event. At the age of seven years he had slid off a roof with a friend who was killed by this incident; the subject had survived by falling on top of his playmate (see Box 1).

The patient's narrative style when recounting developmental experiences and war trauma was remarkable for its lack of detail. Therapeutic endeavour, therefore, sought to improve recall and articulation which enabled him to understand the logical links between events, persons and feelings. Formative experiences were thus recognised through their impact on the subsequent course of his life. He is now conversant with the pervasive influence the repetition compulsion has had in his life, especially with respect to sensation-seeking and 'addiction to danger'.

Insights attained in therapy made the patient feel relieved and reassured. He was able to order and

Box 1. Psychological aspects of PTSD in veterans

PTSD tends to be very persistent and can still be active in old age after more than 50 years

It can remain unrecognised for years or decades and should be considered explicitly in the diagnostic phase

Very often, psychodynamic roots for sensitivity to traumatisation can be retrieved in early life

Reactivation of traumatisation during the course of life can be expected at random by seemingly normal events or by intercurrent illnesses, operation with general anaesthesia and other intrusive medical treatments

Psychophysiological manifestations generally precede behavioural and psychological expressions of PTSD and are more resistant to psychotherapy of any kind

Post-traumatic nightmares are intrusive memories comparable to daytime flash-backs

Psychotherapy for PTSD is important for acceptance of the condition and to find new balance living with a disability, but often does not eliminate disturbing symptoms

No type of psychotherapy has ever been found to be specific for PTSD

Reduction of symptoms, although unimpressive on psychometric assessment, may be and often is experienced as an important therapeutic success

Being in control is a core issue in the needs of any traumatised person, as loss of control is essential in the experience of being traumatised

structure his life to a large extent where previously he thought only chaos could prevail. However, these intellectual insights attained in therapy did not bring about greater affect control. He continued to report overwhelming emotions in response to contemporaneous reminders of war. If any therapeutic gain was made at this level, it was to extend his awareness of the vast array of seemingly neutral stimuli that, by reason of their associations, repeatedly aggravated his chronic PTSD. For instance, the evocative potential of the number 'six' was explained through a link to the number of colleagues killed on a particular mission. Aversive reactions to Easter celebrations were linked to involvement in an operation behind enemy lines in which civilians were killed while celebrating this religious day. A profound suspicion of police officers and traffic wardens was accounted for in terms of the threat uniformed personnel presented to his safety when he was on the run from a POW camp in Germany. Avoidance strategies were developed from this increased understanding but total protection from stimulus exposure was impossible. Consequently, fears rooted in not knowing what might elicit these aversive reactions or when they might occur were reduced rather than eliminated.

During the course of psychological therapy the subject required hospital admission for removal of a cataract and, predictably, he was terrified by the prospect of being submitted to anaesthesia and surgery (see Box 1). To minimise the disruptive potential of this reaction steps were taken to allow him a sense of control. The therapist advised hospital staff of the reasons for his fearfulness of submitting to hospital regimes and how to manage such a patient in the hospital environment. Ward staff were warned to expect extreme night-time restlessness associated with traumatic nightmares. The care team decided that he could choose the date of admission, that local rather than general anaesthesia would be used (in keeping with his expressed preference) and that his insistence on being taken to the operating theatre in a wheelchair instead of lying in a bed was complied with. In spite of these anticipatory measures the patient reported running out of the operating theatre in panic and waking up on the ward floor during the night (see Box 1). Hospital records indicate routine admission, treatment and discharge.

#### Psychometric assessment

At approximately weekly intervals the patient completed the Symptom Checklist (SCL-90-R;

Derogatis, 1983). This self-report scale is well validated with large population norms and is extensively used in clinical and research settings. The SCL-90-R Global Severity Index (GSI) provides the most sensitive numerical indicator of psychological distress. From a 10th percentile baseline (probably due to under-reporting) at onset of psychological therapy, GSI increased to and oscillated about the 70th percentile throughout. When reviewing personal trauma or being otherwise reminded of the war, 'spikes' in the GSI profile peak beyond the 90th percentile occurred. With this subject the process of psychotherapeutic 'working through' intensified psychological distress in the short-term. A distinctive effect of psychological therapy with this subject is demonstrated by the SCL-90-R Positive Symptom Distress Index (PSDI) profile. Psychotherapeutic change occurred at the level of symptom intensity rather than symptom elimination.

## Psychopharmacological management

After 18 months of psychological therapy the patient's condition revealed traumatic nightmares, anger, violent temper, irritability and startle responses to be the most persistent and disturbing legacy of war experiences. These reactions had not been significantly changed by psychotherapy nor had the associated feelings of shame and guilt. Although extremely reluctant to submit to drug treatment, he accepted advice given by both authors in this respect. The patient was advised to take fluoxetine at a starting dose of 2.5 mg for 16 days, 5 mg for another 16 days, 10 mg for 30 days and then to re-evaluate and decide whether to increase to 20 mg/day (see Box 2). The dose range advised for elderly chronic PTSD patients is 5–20 mg. Further increase to 40 mg rarely enhances the effect on impulse control and self-efficacy. The dose would be reduced on the subject's reporting of unacceptable loss of impulsiveness (for example, falling asleep during the day, anorgasmia or general loss of initiative or energy).

## Psychometric assessment during pharmacological treatment

Psychotherapy had ended when pharmacological treatment started. The decision to take fluoxetine evoked a marked GSI spike well above the 90th percentile, because the subject felt that he was

Box 2. Pharmacotherapeutic aspects of PTSD in veterans

Selective serotonin reuptake inhibitors (SSRIs) make sense as a first choice in the medical support for integrated treatment of PTSD

Pharmacology of SSRIs, in causing their initial side-effects and the therapeutic gain, can be described by receptor down-regulation

PTSD patients may be more sensitive to SSRIs than subjects with depression, both regarding the initial side-effects and the therapeutic level of the drug

As urgency is less imperative than in depression, gradual increase of a low starting dose is acceptable and prevents adverse reactions, which are a common cause of therapeutic failure

SSRIs seem to be particularly effective in decreasing impulsiveness and anger and enhancing introspection

SSRIs have a favourable effect on posttraumatic nightmares and dissociation in many PTSD patients

Other pharmacotherapeutic possibilities include monoamine oxidase inhibitors, buspirone and anti-kindling substances like carbamazepine and valproate

Anti-opioids, such as naltrexone, may be useful to treat numbing and dissociation

"handing over control to someone else". Active treatment reduced GSI scores to a level comparable to that in late-stage psychotherapy. Subsequent monthly monitoring sessions revealed a period of drug regimen non-compliance. The non-compliance phase resulted in rapid increases in GSI, which, when he resumed medication, promptly reverted to the level at start of drug treatment. PSDI scores again indicate that changes typically occurred at the level of symptom intensity, but examination of individual symptom dimension scores reveals a distinct and clinically significant treatment effect for hostility (90th decreasing to 1st percentile) and paranoid ideation (55th to 1st percentile; see Box 2). Consequently, the re-emergence of hostile and paranoid symptoms during drug non-compliance was resolved on resuming medication. Least symptomatic impact was effected on phobic anxiety, which remained at the 90th percentile as it had during psychotherapy. Somatisation, obsessivecompulsive, interpersonal sensitivity, depression

and anxiety scores fluctuated seemingly independently of any treatment with, medians around the 55th percentile.

#### **Discussion**

Second World War veterans, among other intensely traumatised persons, can suffer from severely disabling, chronic PTSD (Op den Velde et al, 1990). Notwithstanding flexible care planning and delivery, lasting cures are rarely, if ever, effected for this chronically disabled group, both in our and others' experience (Solomon, 1995). Therapeutic dogmatism is to be eschewed in such cases. In the case of the subject of our study, the primary task was to constitute a therapeutic alliance, to help him to establish new order and regain control over his life. It also implied structuring and reassurance during intercurrent illness and hospitalisation. However, a number of symptoms remained unaffected during the initial phase of psychotherapy. Then, it was suggested to resort to pharmacotherapy as an adjuvant.

Central issues in post-traumatic states of long duration are impulsiveness, hostility and paranoid reactions, which are not typically described in DSM–IV but have been proposed by others (Jongedijk*et al*, 1996; Pelcovitz *et al*, 1997; Chemtob *et al*, 1997). In our patient the strong resistance against medication was clearly reflected in the GSI, but the impact on his general well-being was best reflected in the hostility and paranoid ideation scales.

The gradually increasing dose scheme described for fluoxetine reflects experience gained by W. de L. in treating elderly Dutch veterans and civilian survivors of the Second World War suffering from chronic PTSD. These patients are typically more sensitive to selective serotonin reuptake inhibitors (SSRIs) than those suffering from major depression. Occasionally, starting doses as low as 2.5 or even 1 mg have provoked serotonin syndromes, and the fluoxetine has had to be discontinued. This differential sensitivity is clinically significant with respect to initial reactions to medication, possible side-effects in the short term and ultimate therapeutic outcome. As observed with the subject in our study, serotonin-mediated responses such as anxiety, restlessness, sleeplessness, tension, sweating, as well as known gastro-intestinal serotonin effects, subside with continued treatment through the involvement of receptor downregulation (see Box 2). Being predictable, these reactions can be explained to patients as a proof that medication will have its intended therapeutic effect.

As stated above, impulsiveness is a pervasive trait of chronic PTSD patients encompassing many behavioural expressions like irritability, anger outbursts or physical violence, but also psychological expressions like withheld anger accompanied by guilt and shame. These may be difficult to discriminate from numbing and may in part account for the comorbid diagnosis of depression. It is probably the diversity of behavioural manifestations of impulsiveness that has impeded its recognition as a core symptom in this chronic disorder. A therapeutic implication is that a decrease in impulsiveness may be beneficial for the therapeutic process (see Box 2). By conferring better control over feelings and reactions, a patient's ability for reflection and introspection may improve.

From a biological point of view the trait of impulsiveness can be understood as a function of the amygdaloid complex and the central grey in the limbic system or paleocortex of the brain. In particular, the amygdala seems to play a pivotal role in the organisation of what is essentially the 'defence reaction' (Cannon, 1915; Hilton & Zbrozyna, 1963) common to all mammals including Homo sapiens. In this formulation may lie an important clue to the target of pharmacological approaches to PTSD. Whether psychoactive drugs can exert differential clinical and therapeutic effects through these structures, as it appears to have done with our subject, depends on their 'cleanness' and directedness. Modern SSRIs, with their narrow pharmacological spectrum, have this distinct advantage over conventional antidepressants which have many compromising effects that make them less tolerable to patients and may impede psychotherapy through sedation and altered selfperception.

The pharmacotherapy of PTSD has been investigated far less than for some other major psychiatric disorders - a pharmacological 'breakthrough' is still awaited. Reviews of the literature reveal that many kinds of drug treatments ventured (Friedman & Southwick, 1995; Shalev et al, 1996) have produced rather unimpressive effects on PTSD symptoms when measured with the usual psychometric instruments. This is especially the case in patients presenting with very long-term reactions to severe, life threatening trauma (De Boer et al, 1992); however, such subjects can feel substantially relieved by seemingly modest treatment effects. This is equally true for psychotherapy, which has not demonstrated a capacity for effectively reducing typical posttraumatic symptoms in Second World War veterans. As suggested for this patient, the process of talking about traumatic events and reactions evoked by these experiences may intensify symptoms of defence or hyperarousal. Conceivably, this may

prove harmful to some patients, but generally, it is likely to deter them from regular attendance and the establishment of a constructive working alliance. Much to the surprise of many clinicians, promising evidence has recently emerged of therapeutic effects achieved by the new focal intervention of eye movement desensitisation and reprocessing (Greenwald, 1994). The persistence of this patient's post-traumatic nightmares illustrates that they are different from dreams and nightmares during rapid eye movement sleep (Schreuder, 1996). They are night-time posttraumatic re-enactments or memories, or flashbacks of actual events, which occur during sleep stages (see Box 1). Psychotherapists should have this in mind when focusing on dream material presented by patients. Interpretation helped the subject of our study stop one recurrent dream of sliding off a roof, but reliving war trauma continued unabated in dreams, nightmares and re-enactments, even after accepting the need for medication.

By the usual criterion of symptom status as assessed by clinical interview and psychometric questionnaire, treatment outcome for this Second World War veteran is disappointing. The severity and chronicity of his PTSD suggests that therapeutic effectiveness should be assessed using other measures. The patient expressed this in his own words as follows:

"Before I decided to attend for therapy I had decided to take my life. Too many memories of the war and my dead colleagues made life unbearable for me. Talking in therapy helped me realise I do not have to keep it all to myself. Others can understand and at times of crisis there is someone to turn to without burdening my family. The medication has helped me more than anything else to control anger and violent temper outbursts. Because of my memories of the war many reactions continue as before, but now I feel for the first time, I have learnt to be a survivor".

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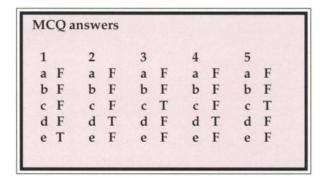
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#### Multiple choice questions

- 1. Which of the following is correct? PTSD:
  - a can best be treated by intensive psychotherapy
  - b is generally refractory to treatment
  - c should be treated by behavioural therapy
  - d is refractory to psychodynamic, but not desensitisation therapy
  - e can be alleviated by combined pharmaco- and psychotherapy.
- 2. Core symptoms of chronic PTSD are:
  - a violent behaviour, hallucinations and paranoid ideation
  - b intrusive thinking, delusions and depression
  - c somatisation, secondary gain and sleeping disorder
  - d impulsivity, arousability and anger outbursts
  - e always accompanied by depression.
- 3. Which of the following is true?
  - a physiological phenomena are not so typical in PTSD
  - b intrusive thoughts are the exclusively essential symptom of PTSD

- c PTSD can remain unrecognised in a patient during several decades
- d PTSD does not cause character changes
- e PTSD cannot remain unrecognised for a long period of time.
- 4. Which of the following is correct? SSRIs:
  - a should not generally be used during psychotherapy
  - b are less effective with longer use, like benzodiazepines
  - c cause receptor hypersensitivity
  - d may facilitate introspection
  - e are insensitive to dose levels.
- 5. Post-traumatic nightmares:
  - a mainly occur during rapid eye movement sleep stages

- b are indistinguishable from anxious dreams
- c are nightly flashbacks
- d occur preferentially during slumber sleep
- e are phenomena of primary process thinking.



## **Commentary**

### Leigh A. Neal

It is a sobering fact that the average age of the surviving veterans of the Second World War is now close to 80 years. The available information indicates that the prevalence of post-traumatic stress disorder (PTSD) in all Second World War veterans is slightly higher than the 15% lifetime prevalence found in Vietnam War veterans, although there are few reliable studies on which to base this conclusion. It is, however, consistent with the finding that combat stress, based on casualty rates, during periods of the Vietnam War was equivalent to the severity of combat stress in the Second World War. There are several epidemiological studies (Beebe, 1975; Tennant et al, 1986) of more specific Second World War veteran groups such as Far East prisoners of war and, predictably, they show higher PTSD prevalence rates, ranging between 30 and 50%.

The case history clearly demonstrates the complexities of managing war veterans presenting with PTSD over 50 years after the traumatic event. The authors' emphasis on developing a therapeutic alliance and providing a flexible psychological intervention with adjunctive pharmacological treatment is a useful model on which to base a treatment strategy.

Many Second World War veterans, although exhibiting post-traumatic symptoms for most of their lives, have characteristically not allowed their symptoms to cause significant social or occupational impairment. They come from an era which encouraged the 'stiff upper lip' and this distinguishes them from the emotionally less inhibited veterans of recent conflicts. Patients in the elderly veteran group tend to present with an exacerbation of their symptoms at times of important anniversaries or during the development of comorbid psychiatric disorders, when their functional reserves are eroded. In fact, PTSD rarely presents as a unitary diagnosis and the presence of

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