MORALE IN BATTLE - THE VULNERABLE RECRUIT

From Major G E Vincenti, MRC Psych, RAMC

Sir, In his recent interesting review of morale in battle 1, Field Marshal Lord Carver asks what is the current involvement of service psychiatry in recruit selection. This can be easily clarified. A Service psychiatrist is asked to interview nearly all potential recruits who disclose a past psychiatric contact. With regard to the stresses of service life, it is usual for such candidates to be rejected although in some cases where simple immaturity led to temporary difficulties, a recommendation may be made that the individual wait for one or two years before reapplying. Service psychiatrists are also involved in other areas of selection, principally for special forces or RAOC ammunition technical officers (bomb disposal).

The concept of employing psychiatrists in recruit selection is not new 2. It has long been realised that not everyone can easily withstand the rigours of battle 3. Modern warfare in particular imposes a degree of stress unknown to the soldier of earlier times 4.

Nevertheless psychiatric involvement in this area has not always been well received, and Winston Churchill in particular mistrusted it 5, nor is it universally accepted in contemporary armies. Psychiatric screening of recruits in the Red Army is strictly limited, since Soviet commanders fear that if allowed free rein it could lead to an unacceptable level of draft dodging and a subsequent inability to conscript sufficient numbers 6. However the presence of large numbers of pioneer-labour battalions allows the Red Army a convenient slot for its less robust recruits. The Red Army is also able to adopt a punitive and political approach to its psychological casualties which is not an option currently available to NATO armies. Only a future large scale conflict will decide which approach is the more suitable.

Concerns over recruitment levels are not confined to the Warsaw Pact armies, as the recent British Army MARILYN initiatives testify. The MARILYN report (Manpower and Recruiting In the Lean Years of the Nineties) is the British Army’s current response to the projected demographic population trough in the next decade. Already calls have been made for the Army to lower its entry standards 7. Although these have so far been resisted, there exists the possibility that in the near future the Army may well recruit a larger percentage of young soldiers who are at an increased risk of psychological breakdown under the stresses and turbulence of military life. The present system of recruit screening relies heavily upon the applicant’s honesty, although Queen’s Regulations does allow an administrative discharge if discrepancies are subsequently exposed. Recourse to such action is at present by no means uncommon. A possible improvement in the current system may be to have all recruits psychiatrically assessed if they are from high risk categories. Research would suggest that applicants at increased risk of future military failure would include those applying to become junior soldiers who could well be seeking an early escape from a disturbed background 8, and those with a proven record of delinquent behaviour 9. This modest increase in the current psychiatric screening of recruits should prove within the capabilities of existing service psychiatric resources, and should guard to some extent against any major influx of psychiatrically vulnerable new soldiers.

I am etc

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REFERENCES

ROCKY MOUNTAIN SPOTTED FEVER

From Major BJ Heap, MA, MRCP, DTM & H, RAMC

Sir, Major Stephenson reported a case of Rocky Mountain Spotted Fever (RMSF) acquired by a soldier whilst on exercise in the United States 1. He also produced a list of rickettsial disease to which I would like to make an addition.

Ehrlichia canis is an intraleukocytic organism of the genus Ehrlichia and the family Rickettsiaceae 2. An important reservoir and vector of the organism is the brown dog tick, Rhipicephalus sanguineus 3. E. canis infection was first described in 1935 among dogs in Algeria 4. The importance of canine ehrlichiosis was first...
realised after the large losses of military working dogs in Vietnam. It is now appreciated that *E. canis* has a worldwide distribution and that the seroprevalence of antibody to *E. canis* in dogs in the United States ranges form 11 to 58 percent. The first recognised case of human infection with *E. canis* has recently been reported. The clinical symptoms of the patient resembled those of RMSF, except that there was no rash. This report prompted a retrospective serological study in Oklahoma which demonstrated that many human cases originally thought to have been RMSF were in fact cases of human ehrlichiosis. The suspect cases, although clinically consistent with rickettsial disease, had not been serologically consistent with RMSF and for want of a better name had been called "Oklahoma Tick Fever".

A worldwide serologic survey of military working dogs in 1979-80 indicated infection rates ranged from 13 percent in tropical and temperate zones below 45 degrees North to 8 percent in the zones north of this latitude. A recent survey of military dogs in Hong Kong showed 13 out of 124 (10.5%) sera sampled to have positive serology for *E. canis*. Serological investigation of their handlers is now being undertaken (D MacDonald. Personal Communication).

*E. canis* must be added to the list of potential rickettsial pathogens for all military personnel in contact with military dogs and be included in the differential diagnosis of "pyrexia of unknown origin".

**REFERENCES**


**H M HOSPITAL SHIP 'OXFORDSHIRE'**

*From Mr Harry Mitchell*

Sir, I am writing a book about the above ship which had a meritorious history in both World Wars. I served on her in the latter as one of the Naval Medical staff.

She was however manned by the RAMC during part WWI and in 1946-48.

I am anxious to contact ex doctors, nurses, RAMC personnel and patients and wonder if you could find a small space to give my request a mention.

With many thanks in advance.

I am etc

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**ARTHROPOD TRANSMISSION OF AIDS?**

*From Dr N R H Burgess and Miss R R Kajekar*

Sir, The possibility that the human immunodeficiency virus (HIV) could be transmitted by mosquitoes, fleas, bedbugs, lice and other biting insects continues to be of concern; at present there is no convincing evidence to support arthropod transmission of HIV.

Developmental transmission, involving multiplication of HIV in the vector and its subsequent transmission by bite, is highly improbable because of the physiology and behaviour of haematophagous insects. The amount of blood ingested is too small to allow for the replication of the virus which is also extremely fragile (to the extent that it is readily deactivated by common antiseptic agents). Even if it were able to survive the insect midgut proteases, it is highly unlikely that such a lymphotropic virus could achieve the migration from the insect's alimentary tract, through the haemolymph in the body cavity and into the salivary glands. Furthermore, the virus is specific to human T cells and recent attempts to infect insect and tick cells with HIV have proved unsuccessful.

Mechanical transmission by passive transfusion of the virus or infected lymphocytes via the contaminated mouthparts during interrupted blood feeding seems equally unlikely. For example, the mouthparts of lice, although long and penetrating, are very fine, making a small self-sealing wound in the host. They are constructed of unwettable materials and are emptied and cleaned after use to prevent them becoming blocked with congealed blood. The amount of blood remaining on or in the mouthparts is considerably below the minimum inoculum required for the transmission of the virus. Furthermore, the louse is equipped with an efficient one-way valve in its pharynx, thus blood once swallowed is not available for re-injection. The mouthparts of fleas may be better adapted for...
mechanical transmission of the virus, but the habits of
the flea (host fidelity and infrequent feeding) make it an
unlikely vector. Although the feeding habits of bedbugs
are conducive to mechanical transmission, they have
never been shown to be natural vectors of any disease.

Mechanical transmission by arthropods has been
demonstrated with viruses which generate a high
viraemia, but HIV carriers have a very low viraemia and
a reduced lymphocyte count of which only 1 in $10^6$
lymphocytes may be infected.

If a mosquito feeding on an infected patient
circulating 1000 units of HIV was interrupted and
immediately began to feed on an infected human, the
likelihood of it injecting even one virus particle would
be $1:10^7$ and one virus particle is well below the infective
threshold.

HIV has a very low infectivity which may be enhanced
by the presence of immunosuppressive prostaglandins
found in semen. During sexual intercourse these
prostaglandins suppress the immune defence of the
uterus, reducing sperm rejection. Prostaglandins may
also enhance HIV transmission by similarly reducing
rejection of the virus. However, at the interface between
insect and host, the relevant prostaglandin levels are
some ten thousand fold lower than in semen.

If mosquitoes and other bloodsucking arthropods are
vectors of HIV, individuals with greater exposure to
insect bites should be at greater risk of contracting
AIDS. However, there is no evidence of this.

Additionally, it has been shown that, apart from
transfusion cases or maternally infected neonates, AIDS
incidence is largely restricted to age groups from puberty
onwards, whereas true arthropod transmitted disease
typically involves all age groups, with many of the
notorious arthropod-borne viruses occurring most
frequently in children. Adults, once exposed, commonly
become immune.

The observed epidemiology, combined with evidence
that HIV is unlikely to be ingested by or replicate
effectively in bloodsucking arthropods, reinforces the
improbability of HIV transmission by haematophagous
arthropods.

We are etc

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UNPUBLISHED RESEARCH PAPERS
From Major T O Jefferson, RAMC

Sir, During the course of my work I am often in search of
published or unpublished research relating to the
thousand and one aspects of the practice of medicine in
the Services. Access to references and content of
unclassified published material is relatively easy thanks
to our excellent RAM College computerised search
facility. However, knowledge of the mere existence of
unpublished material is very difficult to come by. An
example of this is the dozens of theses for Master of
Science or Medical Doctorate degrees and Service
projects undertaken by Service medical officers over the
years and never published either completely or partially.

I believe this to be a tri-Service problem, not just
confined to the Army Medical Services (AMS), as it
comprises areas of interest to Service medical officers
for example, road traffic accidents, a field in which
several excellent works produced by students at RMCS
Shrivenham are scarcely known outside that institution.

In addition, although the AMS Research Executive
has a coordinating role for the AMS, there is no facility
to retain copies of works and reports and provide access
to them.

I would like to suggest the creation of a tri-Service
central registry for medical research and a centralised
facility for copies of finished or unfinished medical
research projects to be retained, catalogued and
accessed by readers.

The RAM College library could be the ideal place for
both facilities.

I am etc

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From L A Maguire, MA, ALA

Sir, In response to the letter submitted by Major T O Jefferson, may I reply on behalf of the MOD Medical Library Services.

First, MOD Medical Librarians too, have found it extremely difficult to find out about, let alone locate unpublished research material. By its very nature the usual tools of the trade available to the librarian are made useless, and it is very often through second, if not third hand knowledge, or from informal discussions that we can verify the existence of the material. We can therefore fully identify with the problem Maj Jefferson has highlighted.

Secondly, any copies of this type of material, again due to its nature, cannot be acquired through normal channels open to librarians, we therefore rely totally on the originating author(s) to deposit a copy of the report, thesis, etc, in the library. The Library Services have no authority to insist this be done, and very often the institution from which the research was carried out retains the finished result.

MOD Medical Libraries welcomes the idea suggested by Maj T O Jefferson, of a Tri-Service research registry and centralised facility for holding this valuable material. We would willingly take steps, with some cooperation from research establishments, to setting this in motion.

However, it must remain clear that
(i) The initiative to keep this project going must be with the willingness of researchers and students to inform the Library Service of their research projects, either directly or through AMS Research Executive.
(ii) The responsibility of depositing a copy of the material lies with the author(s). The Library will be unable to purchase theses etc. from the author.

MOD Medical Library Services would then produce a listing of the documents held, and of on-going research registered, for future researchers to consult.

RAM College Library would be an ideal location for this centralised registry and holding library, but as the potential volume of material likely to be deposited is as yet unknown, it may be wiser for each Service to look to its main medical library as deposit library. All three Services Libraries would then be informed of each others holdings.

The College Librarian would welcome any suggestions or comments from interested parties concerning this situation, before studying the feasibility of the proposal.

I am etc

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