DID DISEASE DETERMINE THE OUTCOME AT GALLOPOLI?

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CRIMEAN WAR (1854-1856)

- Advice from medical officers relating to hygiene was ignored
- Lack of sanitation favoured spread of infectious diseases
- Men debilitated from disease and poor nutrition
- In first 7 months 10,000 died in a force of 28,000
- Infection rife in hospitals -23% of in-patients at Scuttari Hospital died

SOUTH AFRICAN (Boer) WAR (1899-1902)

- Troops not instructed in personal or communal hygiene
- Drinking polluted water from the Modder River was followed by 5,000 admissions to the Bloemfontein Hospital with gastro-intestinal infection
- Dental state of soldiers ignored
- Sickness a major cause for concern. For each 1,000 troops 958 reported sick at least once/year
- Hygiene measures were at the direction of unit commanders most of whom failed to consider the welfare of their men
- Typhoid fever caused devastating losses. 16,000 deaths from typhoid and dysentery alone.
- Battle casualties only 6,000

GREAT WAR - PLANNING ERRORS

- Recruitment medical standards too low-applicants with physical defects accepted. Later found unfit for field deployment and returned to Australia for discharge
- Dental state again ignored and no dentists recruited until August 1915
- Doctors with expertise in public health medicine and bacteriology recruited as RMOs instead of in their specialty
- Lack of education in disease prevention contributed to the high infection rate whilst training in Egypt

PREDISPOSING FACTORS TO ILLNESS – NOT CONTROLLABLE

- Harsh environment – hugged coast line, hot dry weather
- Lack of fresh water
- Inability to bury many of the dead
- Abundance of animal manure
- Presence of huge numbers of the vector of infection – the fly

PREDISPOSING FACTORS TO ILLNESS-CONTROLLABLE

- Grossly inadequate sanitation and food protection
- 'The Bible' of sanitation and hygiene measures *The Manual of Elementary Hygiene (1912)* largely ignored
- Refusal of C-in-C MEF to appoint an autonomous Director of Medical Services (ANZAC)
- Advice of Medical Officers to enforce hygiene measures was disregarded by most junior field officers
- Failure to provide a pathology diagnostic laboratory until late June to investigate causes of infection led to erroneously ascribe the predominant infection as being water-borne and probably a form of typhoid fever
- Refusal of Army Command to agree to incinerating infected material and excrement
- Refusal of DMS, MEF for of chlorinated lime and heavy mineral oil to destroy refuse
- Administrative duplication. The existence of 3 independent medical administrations made rapid and effective determinations in a crisis almost impossible
- In early May few flies at Gallipoli but their numbers quickly increased with the hotter

weather and an abundance of organic waste material.

- By mid-June many soldiers reporting sick with diarroheal disease and dysentery
- In July, a director of sanitary medicine was appointed but it was a further 5 weeks (late August) before *Standing Orders* outlined the measures to be taken.
- These Standing Orders detailed steps to: protect food and water; disinfect contaminated articles; incinerate infected material; cleanliness of clothing
- By this time infection rate so high that these measures had little impact.

THE MARCH OF INFECTIOUS DISEASE

- Infection was out of control and by end of July a total of 20,000 of the 84,000 ANZAC troops on the Dardanelles required repatriation due to illness
- 4 July Brigadier Monash convened meeting of RMOs. They stated:
  1. Health poor & deteriorating
  2. Predisposing factors –flies, weather, unpalatable and monotonous diet, little rest, battle fatigue, lice, dust
  3. Major clinical findings: loss of weight, respiratory infections, tachycardia, cardiac dilatation
  4. No further steps could be proposed to improve hygiene or sanitation
- Battle fatigue due to inability to rotate troops from front line (as on Western Front). Some troops in action continually for 4 months
- Food was unappetising. Command made no attempt to vary rations or provide a canteen where troops could purchase extras
- On July 30 ADMS recorded 30% unfit, remainder not fresh.
- A specialist physician examined troops who had not reported sick. He found:
  77% emaciated and anaemic
  78% intermittent diarrhoea
  74% shortness of breath
  64% persistent ulcers
  50% tachycardia
  16% required dental treatment
- The situation continued to worsen. By late August:
  reporting sick - 9% per week
  injured - 1.5%
- General Hamilton was alarmed at sickness rate (24% per month). 30,000 hospital beds at Malta required. He stated that unless replacements arrive he could not hold the line.
- October: Wounded – 73. Sick – 857. Returned to Unit – 331. Repatriated – 532. November - 14 - 1,348
- For the final months (August-November 1915) 6th Aust Field Ambulance reported: 896 wounded; 2,108 reported sick; 1,857 evacuated

In November Gen Hamilton replaced by Gen C Monro who recommended withdrawal

SUMMARY

- Lessons were not learned from previous campaigns in relation to sanitation and hygiene instruction
- Infectious disease would have been much reduced by health planning
- Once infectious disease established it was almost impossible to restore health to the force most of which was severely debilitated
- The weather, difficult terrain, and tenacity of Turkish Army were other factors adversely affecting the Allied campaign
- The appointment of a Director of Medical Services (ANZAC) would have reduced confusion, increased efficiency and improved relations with British Army Command
- 'There is no doubt that a great part of the Army were in no fit state to launch an offensive' and 'If it had not been for infection the outcome at Gallipoli may have been quite different'

(CEW Bean)