



The ancient city of Rome, its empire, and the spread of tuberculosis in Europe



Jared J. Eddy*

University of Cambridge, Faculty of Classics, Sidgwick Avenue, Cambridge CB3 9DA, UK

S U M M A R Y

Keywords:

Roman
Europe
Archeology/archaeology
Paleopathology/palaeopathology
History
History of medicine

The formation of the Roman Empire constituted an unprecedented joining of Mediterranean and European lands and peoples, centering on the capital of Rome. During the late Roman Republic and early Roman Empire (*ca.* 200 B.C.–*ca.* 200 A.D.) urbanization and population growth led to conditions favorable to the spread of tuberculosis throughout Italy and especially within Rome itself. Trade and military expansion would have acted as vehicles for the further extension of tuberculosis to the provinces via direct transmission from Italian-born Romans to the native populations. However, an alternative explanation may better explain the increase in the number of archeological cases of tuberculosis with the start of the Roman era. A literature review of Roman-era cases and their locations suggests that the development of an urban, Roman way of life resulted in significant increases in prevalence in regions where tuberculosis had previously been endemic only at a low level.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

Tuberculosis has been identified in the remains of European individuals since *ca.* 5800 B.C. However, these few finds tend to be scattered widely in place and time [1]. In contrast, the period between *ca.* 50 A.D. and *ca.* 500 A.D. represents an increase in the number of European archeological sites and human remains with evidence of tuberculosis, almost all of which occur in the context of Roman civilization.

Three possible explanations for this phenomenon include the following: 1) the Romans harbored a particularly virulent form of tuberculosis which subsequently spread to the native populations of the lands they conquered, 2) there was something about the Roman way of life that contributed to an increased incidence of the disease in lands where it had already been present, and 3) Roman tuberculosis is simply more visible to archeologists than tuberculosis among the cultures which preceded Rome since the Romans left more of their civilization (and of their own bodies) to be discovered.

While the third possibility cannot be discounted, there are several reasons to believe that the Roman increase is a true one and

that this period in history represents a watershed moment for the spread of tuberculosis in Europe. The argument rests upon the fact that the tale of Rome's unique ascendancy also marks the simultaneous development of conditions conducive to the transmission of tuberculosis. Studies of tuberculosis in the modern period have determined that rapid population growth, increases in population density as a consequence of urbanization, and the social disruption following warfare and civil unrest all contribute considerably to its increased prevalence [2].

2. Roman Italy

Rome was founded as a small village on the banks of the Tiber River, traditionally in the 8th century B.C. By the beginning of the 3rd century B.C. she was a city state which, through a series of wars and alliances, had obtained hegemony over the entire Italian peninsula. The defeat of Carthage in 202 B.C. brought Rome into contact and hence competition with the Hellenistic Kingdoms of the eastern Mediterranean which were the legacy of Alexander the Great's Empire. As they fell in quick succession, each victory brought scores of slaves to Rome and Italy, swelling the peninsula's population. Moreover, the spoils of military conquest and new trade opportunities brought economic prosperity to Italy's towns and allowed the elite to fund innumerable public construction projects. In this favorable economic climate, the population of freeborn Romans and their Italian allies boomed. Detailing this

* Corresponding author. Boston University Internal Medicine Residency Program, 72 East Concord Street, Evans Building Suite 124, Boston, Massachusetts 02118, USA. Tel.: +1 (617) 638 6500; fax: +1 (617) 638 6501.

E-mail address: jaredjy@bu.edu.



Figure 1. Locations for skeletal finds of putative tuberculosis in Europe ca. 50 – ca. 500 A.D. superimposed on a map of the Roman Empire in Europe, 117 A.D. Numbers and letters correspond to those in Table 1.

“transformation of Roman Italy,” Neville Morley estimates that the free population of Italy rose from some 4.5 million to 12 million between 175 B.C. and 28 B.C., with more than a million additional Italians settling outside of the peninsula. That assumes an average population increase of 8 per 1000 per year [3]. If accurate, such a rate has rarely been matched by other pre-modern societies.

Despite these overseas triumphs, the 1st century B.C. involved great social unrest and disruption. The Italian allies of Rome, having been denied their request for citizenship, revolted en masse in a brutal “Social War” which rocked the peninsula. The end result in 88 B.C. was an Italy that was even more urbanized as the Romans imposed stricter control over formerly rebellious rural regions. Even some already populous areas with their own indigenous urban traditions were affected. In a single stroke, the general Sulla added 2000–3000 new Roman colonists to the approximate 10,000 inhabitants of Pompeii as a punishment for their support of the Italian separatists, resulting in considerable internal strife [4]. The next decades witnessed the chaos of the civil wars as armies backed the ambitions of individual generals like Julius Caesar rather than the Senate. Peace and unity finally came with the ultimate triumph of Caesar’s adopted heir Octavian, the future emperor Augustus. In the ensuing centuries a larger proportion of the population would live in urbanized settlements than in almost any other pre-industrial society before or after, and especially so in the Italian heartland where as many as one third of the population lived in cities [5].

The city of Rome had expanded rapidly in population, though to a lesser degree in size, and continued to do so. Slaves, families who had been dispossessed of lands and legacies in the civil wars, Italians from the countryside who preferred the life of the city to country labor, richer merchants, and anyone with serious political aspirations found themselves drawn to Rome. The majority of people clustered in apartment blocks called *insulae* – literally, “islands” within the city. While some *insulae* could be relatively spacious and grand like the structures still standing at the port site of Ostia, many were much baser. The poorest Romans crowded into multi-storey structures called *deversoria* where many were forced to sleep in internal rooms without windows, passing through other occupants’ quarters, and to take meals in communal kitchens [6]. It is in conditions like these that one can imagine tuberculosis spreading with a vengeance. Those who owned shops (*tabernae*) lived in small back rooms with poor lighting and ventilation, and few barriers to separate them from potentially infectious customers.

While the squalor of the crowded capital may not have been replicated to the same degree in Italy’s other cities and towns, the economic necessity of supplying Rome and an efficient road system linked most population centers in Italy with the capital. Burial was prohibited within city walls, but two classic cases of Pott’s Disease (tuberculous spondylitis) have been found at Herculaneum on the Bay of Naples among those fleeing the eruption of Mount Vesuvius in 79 A.D [7]. A third spine with characteristic changes but without

Download English Version:

<https://daneshyari.com/en/article/2401463>

Download Persian Version:

<https://daneshyari.com/article/2401463>

[Daneshyari.com](https://daneshyari.com)