Exportation of MDR TB to Europe from Setting with Actively Transmitted Persistent Strains in Peru

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We performed a transnational molecular epidemiology analysis of multidrug-resistant tuberculosis in Peru, Spain, and Italy. This analysis revealed frequent transmission in Peru and importation of a strain that recreated similar levels of transmission in Europe during 2007–2017. Transnational efforts are needed to control transmission of multidrug-resistant tuberculosis globally.

I nternational migratory movements have created a need for cross-border surveillance of tuberculosis (TB). Monitoring the transmission of multidrug-resistant (MDR) Mycobacterium tuberculosis strains deserves further analysis (1). Through migration, MDR strains can become more widely dispersed; they can be exported from the 30 countries with 89.7% of the incident MDR cases (2) to lower prevalence settings.

We performed whole-genome sequencing (6) with 12 of the 17 isolates of the cross-border MDR TB cluster C8-LPMDR (7 from Florence, 2 from Milan, 2 from Lima, and 1 from Madrid). In a median-joining network analysis, these isolates were distributed along 2 branches (Figure). One branch included all the isolates from Florence. Although we lacked precise data from contact tracing to verify details regarding transmission in Florence, we were able to determine that all the Peru migrants involved came from Lima. In Florence, there is a large community of persons from Peru, which offers opportunities for interacting, such as shared residence and social gatherings. The few differences (0–2 single-nucleotide polymorphisms [SNPs]) found among these isolates strongly suggests these isolates were recently transmitted in Florence. An isolate from Lima (6068) was only 3 SNPs different from a Florence isolate, demonstrating a close genetic
relationship between the Florence and Lima isolates. This close relationship also suggests that the starting point of this branch was an exportation event of an isolate from Lima. The second branch in the network includes 2 isolates identified in Europe (1 Madrid [city of origin unknown, data not available] and 1 Milan [origin Lima]) and 1 isolate identified in Lima. Because the most recent common ancestor is positioned between the 2 branches and the 2 isolates from Lima are in different branches, these branches probably represent 2 independent exportations of 2 variants of a strain prevalent in Lima that diversified after a prolonged period.

These data reveal that high-risk strains are being exported from Lima to 2 countries of Europe (Italy and Spain). Not only were these strains exported from Lima, but 1 strain caused a prolonged and ongoing transmission event in Italy. The transmission of this strain has caused at least 3 cases in Lima, 11 in Florence, 2 in Milan, and 1 in Madrid.

In another report, the international distribution of an MDR TB strain that caused 10 cases across 3 countries of Europe (Romania, Austria, and Germany) was investigated (7). The exportation event discussed in our report is geographically wider (intercontinental, from South America to Europe), involved more cases (17 total, with a transmission cluster of 12 cases in Italy), and occurred over a more extended period (secondary cases spanned 11 years).

Only integrative transnational efforts can provide a clearer picture of transmission of MDR TB, which has become more complex because of international migration. In this cooperative analysis involving Peru, Italy, and Spain, we detected a serious problem of active MDR TB transmission in Lima. This situation led to a pool of persistent strains that were responsible for similar transmission events after exportation to Europe via migration.

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### Rectal Lymphogranuloma Venereum, Buenos Aires, Argentina

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Among 34 men with proctitis in Buenos Aires, Argentina, 16 (47%) had *Chlamydia trachomatis* infection, 11 (68.8%) of which were biovar lymphogranuloma venereum. The outbreak was probably local, as in Europe. In Argentina, lymphogranuloma venereum should be a suspected cause of proctitis in HIV-infected men who have had unprotected anal sex with men.

Lymphogranuloma venereum (LGV) is a sexually transmitted infection caused by *Chlamydia trachomatis* serovars L1, L2, or L3 and their variants. LGV has been considered endemic to Asia, Africa, and the tropical region of South America. Over the past 2 decades, case reports of LGV in Argentina have been sporadic and regarding only patients who acquired the infection abroad.

In the Netherlands in 2003, an outbreak of rectal LGV among men who have sex with men (MSM), mainly HIV infected, was reported (1). This report was followed by many other reports from other developed countries (2, 3).

LGV has been traditionally described as causing inflammation and swelling of the inguinal lymph nodes and also involving the rectum, causing acute proctitis, particularly among HIV-infected MSM (4). Since 2015, some clinicians in Argentina have suspected LGV in certain patients with proctitis (regardless of association with inflammatory tumors) in which *C. trachomatis* has been detected but not genotyped. Thus, we conducted a prospective study to assess the *C. trachomatis* genotypes as the causative agent of infectious proctitis in Buenos Aires, Argentina. Our study was conducted in a private practice and a public hospital, under a protocol previously approved by the hospital’s ethics committee (no. 201723).

From September 1, 2017, through February 1, 2018, we included in our study every man who visited either the private or public study site and who had rectal signs or symptoms of proctitis and had not taken antimicrobial drugs in the previous month. None of the included patients was referred by a previously included patient. Each participant signed an informed consent form.

Over the first 5 months, we obtained a rectal swab sample from 34 men on their first visit. To detect *C. trachomatis*, we extracted DNA from the samples by using real-time PCR targeting a cryptic plasmid fragment (Alert PCR; ELITech Molecular Diagnostics, https://www.elitechgroup.com). Positive samples were genotyped by *omp3*-based PCR restricted fragment length polymorphism (5).

Of the 34 samples analyzed, 16 were positive for *C. trachomatis*; 11 were identified as genotype L2 and 5 as genotypes D, F, or J. All participants reported having engaged in unprotected receptive anal sex in Argentina, except for 1 who had had receptive anal sex while in Mexico. None declared having traveled to an LGV-endemic area. Mean age was 31.63 years (range 22–43 years). All