Chronic Q fever Presenting as Multiple Subcutaneous Abscesses and Possible Transmission of Q Fever from Kissing

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Introduction

Q fever, caused by the pathogen Coxiella burnetii, is transmitted by inhalation of particles that contain Coxiella organisms with the main reservoirs being infected sheep, cattle and goats. There have been rare reports of possible transmission sexually, however no cases of transmission through saliva person-to-person. We present a case of possible transmission of Q fever from kissing as well as the first case of subcutaneous abscesses caused by Q fever in an adult.

The Case

A 42 year old previously well male presented with multiple bilateral strokes in the context of being treated for shingles for the past 30 days for right eye vesicular lesions in a V1 distribution. Lumbar puncture demonstrated varicella-zoster virus DNA by PCR and treatment with IV acyclovir lead to no improvement. Bilateral chronic pulmonary infiltrates developed and flow cytometry showed absent CD4 and CD8 cells. Investigations included negative HIV serology and PCR, 2 negative bronchofibroscopies and 2 normal transesophageal echocardiograms. Multiple chest wall and extremity cold abscesses developed which were drained. Bacterial, fungal and mycobacterial cultures were initially negative.

Results

16S rRNA amplification and Sanger sequencing from the abscesses yielded Coxiella burnetii (targeting the IS1111 and IS30A genes). The original CSF sample and blood were also PCR positive for C. burnetii. He had positive Q fever titres (Phase 1 IgG 1:256, IgM 1:64 and Phase 2 IgG 1:4096, IgM <1:16). The specimens were sent to the French Reference Centre for Rickettsiosis, Q fever and Bartonellosis (Marseille, France) for culture and susceptibility testing. C. burnetii culture from the abscesses was positive, confirmed with immunofluorescence and susceptible to Doxycycline.

Despite treatment with Doxycycline and Hydroxychloroquine and then additional Rifampin and Ciprofloxacin, the patient deteriorated and was transferred to hospice care before his death. No zoonotic risk was identified. Contact and droplet precautions were maintained throughout his hospitalization but discontinued in hospice. His partner gave her final goodbyes with deep kissing but no sexual intercourse or oral sex. She developed fevers and respiratory symptoms 5 days later, persisting for 4 weeks. Her Q fever serology showed Phase 1 IgG 1:512, P1 IgM 1:32, Phase 2 IgG 1:4096, P2 IgM 1:16.

Conclusions

This case suggests Q fever transmission through kissing in the presence of chronic pulmonary infiltrates which has not previously been reported, although transmission via intercourse has rarely been reported. Chronic Q fever in the absence of valvular lesions with cold chest wall abscesses and profound lymphopenia, has not been previously described in adults.

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References


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