Important prescription of antibiotic prophylaxis after a tick bite in the French Alps: blame it on the guidelines?

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Background: Lyme borreliosis is transmitted by tick bite; therefore, several studies explored the relevancy of a post-bite antibiotic prophylaxis. The results of these studies are conflicting. As a consequence, medical societies do not recommend strongly this prophylaxis; however, guidelines are heterogeneous. We aimed a) to compare the guidelines from different medical societies in different countries concerning this question, and b) to explore the attitude of general practitioners (GP) and ER physicians (ERP) in our area (French Alps) after a tick bite.

Materials/methods:

a) We analyzed the guidelines from 14 European countries (Czech Republic, Finland, France, Germany, Netherland, Norway, Poland, Romania, Slovaquia, Slovenia, Spain, Switzerland, UK, Ukraine), the USA (IDSA), and guidelines emitted by WHO and ESCMID.

b) We diffused to general practitioners of our area an anonymous online questionnaire on their attitude after a tick bite.

Results:

a) Antibiotic prophylaxis was not recommended by 5 societies, recommended in some cases by 7 societies (including the French infectious disease society), and not discussed by 7 others. None recommended to systematically perform a serology.

b) 317 participants answered the questionnaire (251 GP and 66 ERP, age 41.1±10.9). 55.2% saw annually at least 5 cases of tick bite. 59.9% that they had already prescribed antibiotic prophylaxis in this case, and 21.8% declared that they prescribed it to more than half of these cases. The parameters most cited that lead to this prescription were an engulfed tick attached for more than 48h (66.2%), pregnancy (34.1%), an immunocompromised status (33.4%), and in case of tick bite in a child (16.7%). When asked about a tick bite in a 40 year old man, a pregnant woman or a 5 year old child, 44.9%, 69.4% and 58.4%, respectively, answered that they would treat the case. They mainly chose to use amoxicillin (14-21 days or 10 days) for the child and the pregnant woman, and doxycycline monodose for the man.

Conclusions:

GP and ERP often prescribe prophylaxis after a tick bite. This probably reflects both the growing public anxiety concerning this disease, and the somehow unclear French recommendations. They might mention more clearly that prophylaxis is not recommended.