

Feathers do not cause avian influenza

Microbiologist Sucharit Bhakdi from Mainz warns of hysteria / vaccination against influenza

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Avian influenza which has till now been diagnosed in Southeast Asia only, has now also reached Russia. We talked with Sucharit Bhakdi, Professor at the Johannes Gutenberg University in Mainz, Institute for Medical Microbiology and Hygiene, on potential dangers caused by the H5N1 virus.

Germany has meanwhile stopped imports of birds and feathers. Do you think these measures make sense?

Bhakdi:

It is understandable to put a ban on imports of birds. It is completely crazy and beyond all scientific finding, though, to ban imports of feathers. Leaving out the fact, however, that entire industries would get into economic difficulties, if imports of feathers from Asia were prohibited. These feathers were washed and dried – and moreover on transport for many weeks before they arrive here. It is inconceivable that a virus which is surrounded by a lipids case, i. e. a fat case, might outlive all these procedures.

How does avian influenza spread?

Bhakdi:

The viruses get into the body via the respiratory tract.

According to WHO sources, 57 people died by avian influenza globally. Under which circumstances does the illness pass over to human beings?

Bhakdi:

In fact, it has meanwhile been proved that the virus might pass over to human beings. This is indeed the reason for present hysteria which sometimes conveys the impression, as if the end of mankind was imminent. However, in very rare cases, the virus managed to pass over from one of 100.000 birds which have fallen ill to one human being. Actually, human beings are no appropriate hosts, otherwise there would have been many more infections. For the time being, an infection from man to man is even more improbable. This was only the case with three Thai people who lived together in very cramped surroundings.

What are many scientists worrying about then?

Bhakdi:

The virus would have to modify itself one more time in order to be transmitted efficiently from one human being to another. It just cannot be totally excluded that such a modification might happen. Let me try to explain it in a pictorial way. Influenza viruses have eight different kinds of proteins. Two of them are virtually the hands by means of which the virus docks, the other proteins virtually constitute the body which is partially responsible for specificity of the host (human being – bird). The “hands” of the avian virus are apparently in particular “evil”. If they dock a person, though the “body” does not fit to the human being, the virus is usually not able to propagate, and cannot “jump over” from one person to another. It becomes dangerous, if the human influenza virus and the avian influenza virus meet in the same living being. It might happen then that the viruses exchange their “hands”. A virus provided with avian influenza -“hands” could then propagate within the human body and also spread among human beings.

What kind of preventive measures could be taken then?

Bhakdi:

Usually, two simultaneous infections do not occur in human beings but more likely in pigs. Theoretically, the exchange of “hands” could also take place in human beings under the prerequisite that two infections occurred at the same time. This can be prevented by preventing an infection with the human virus – namely by vaccination against influenza.

Is vaccination available against avian influenza?

Bhakdi:

No, not at present. It causes problems to cultivate viruses for conventional serum production. From the genetically engineering point of view, however, it should be possible to prepare a serum.

What should people who travel to the concerned regions in Asia keep in mind?

Bhakdi:

The avian influenza virus has never jumped over to someone who simply “travelled” past. A rather close contact with birds would be necessary, instead. Which tourist would visit a poultry farm? Vaccination against influenza, however, is recommended in any case.

Interview held by Stefanie Widmann