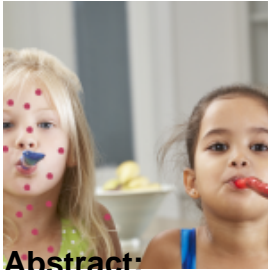


It's A (Pox) Party!

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Abstract:

Chickenpox is a very common childhood disease caused by the *Varicella-zoster virus* (VZV). It is highly contagious and is found worldwide. There is a preventative vaccine available, but not all parents choose to have their children vaccinated. "Chickenpox parties", which were prevalent in the 1970's and 80's, have re-emerged among social groups who identify as anti-vaccination. In this article, we examine the Pox Party practice and the potential risks they pose.

Main Article:

Chickenpox (*Varicella zoster*) is a highly contagious, viral disease that usually runs its course in 5 to 10 days. Common symptoms include an itchy, blister-like rash, fever and general malaise. It may take 10 to 21 days after infection for the first symptoms to appear, but a person is most contagious from 2 days before the rash first appears to shortly after the onset of the rash. Contagiousness continues until the skin blisters crust over. Chickenpox in childhood is generally less severe than in adolescence or adulthood, and surviving the illness induces lifelong immunity to clinical *Varicella* in almost everyone with a normal immune response.

Prior to the introduction of *Varicella* vaccine, 90% of the population would have had chickenpox before they reached the age of 12. According to the Centers for Disease Control, there were 4 million cases of chickenpox in the USA annually, pre-vaccine. About 10,000 people were hospitalized annually with complications, and approximately 100 died. Adults accounted for only 5% of reported cases, but 35% of the deaths from the disease.

Chickenpox Parties Became Popular In The 1970'S And 80'S

"Chickenpox parties" became popular in the 1970's and 80's as a way for parents to expose children to the virus at a young age, thereby avoiding any complications associated with contracting the disease later in life. At the party, otherwise healthy children were encouraged to touch the skin blisters of and share lollipops, whistles, etc. with an infected child. These parties have become popular once again amongst groups of parents that choose to not have their children vaccinated against the disease.

The *Varicella* (chickenpox) vaccine was licensed for use in Japan in the 1970's and was in routine use in Japan and Korea by 1988. It hit the US market in 1995, followed by Canada in 1998, and the UK and Australia in 2003. The varicella vaccine is 85% to 90% effective in the prevention of chickenpox and 100% effective for prevention of moderate or severe disease (characterized by many skin blisters). According to the Centers for Disease Control and Prevention, hospitalization related to chicken pox has decreased by 93 percent since the vaccine was introduced.

Why Pox Parties?

Proponents of the Pox Parties believe that chickenpox is a harmless childhood disease and that catching chickenpox as a wild virus will provide better immunity later in life than the immunity achieved by receiving the vaccine. Let's look at each of these beliefs:

1. Chickenpox is a harmless disease in children:

For most otherwise healthy children, chickenpox is a mild disease that lasts between 5 and 10 days. Itchy skin lesions and fever are uncomfortable, but once the disease runs its course, the child can resume normal activity without any lingering complications.

However, a more severe response to the virus is possible. Severe complications of varicella may include:

- Pneumonia
- Bacterial infections, like impetigo
- Encephalitis
- Decreased platelets
- Arthritis
- Hepatitis
- Death

Although the risk of complications is higher among those with compromised immune systems, healthy children and adults can also be affected.

2. Catching 'wild' chickenpox provides superior immunity to the immunity achieved through vaccination:

It is true that surviving chickenpox induces lifelong immunity to future infection by the virus. One of the criticisms of the vaccine is that its efficacy may wane over time. Although studies have shown that immunity through vaccination lasts at least 20 years, the long-term efficacy is still being monitored and assessed. It is possible that an additional booster of the vaccine will be indicated after the first two childhood doses are administered. Nevertheless, even those who have a reduced immunity from the vaccine and do catch the virus will have a much milder case of the disease.

Risks of the Pox Party

Aside from the potential severe complications of the chickenpox disease in party attendees, there are other risks to consider when deliberately exposing a child in this way:

1. Extremely Contagious:

Chickenpox is extremely contagious 1 to 2 days before any symptoms appear. This means that someone could unknowingly spread the disease to those who are most at risk of developing severe complications from chickenpox. Included in this category are:

- Pregnant women who have not had chickenpox

- People who have a suppressed immune system (for example people undergoing chemotherapy, or steroid therapy, or people with HIV/AIDS)
- Babies less than 1 month old
- Children with severe skin conditions
- Adolescents and adults who have not had chickenpox

2. It may not be the only virus or bacteria shared:

Chickenpox may not be the only virus or bacteria to be shared. Under normal circumstances, it would be ill advised for children to share saliva through lollipops or other means due to the risk of acquiring an infectious disease such as the flu, strep throat, mononucleosis or even the common cold. There are no immunity benefits to acquiring any of these diseases and they could lead to further health complications.

The World Health Organization has included the *Varicella* vaccine in its WHO Model List of Essential Medicines for Children (5th edition, April 2015). This recommendation comes with the qualification that any country including the chickenpox vaccine in its overall vaccination program must ensure that their resources are sufficient to ensure reaching and sustaining vaccine coverage of at least 80% of the population. If the coverage is less than 80%, there is a risk that the spread and transmission of chickenpox may shift, leading to an increase in the number of cases in adolescents and adults.

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