[back] Chickenpox

CHICKENPOX

Also known as varicella

By Hilary Butler

Chickenpox is caused by the Varicella-Zoster virus (VZV, a double stranded DNA herpesvirus), and is common in spring and early summer in temperate zones. The latest astounding figures for New Zealand are 50,000 cases per year, 150-200 hospitalisations and 1 or 2 deaths[1].

Chickenpox is spread either by droplet infection or contact with the spots of a person with chicken pox. The incubation period is 2 – 3 weeks, during which time the virus replicates in the lymph nodes, liver and spleen, with a second more intense viraemia occurring just before the rash appears. The infectious period starts one day before the rash appears and continues until the scabs fall off..

Chickenpox usually occurs in children under the age of ten with the peak age between 2 and 6 years. 90% of the population has been infected by the age of 15. Two percent of chickenpox cases are reported in adults, but 25-50% of the deaths.

SYMPTOMS:

Shortly before the rash appears, the infected person may have a temperature of about 38.5°C, not feel like eating, be tired, and have photophobia. The rash usually appears on the body and spreads to arms, legs, face and scalp. In

some children, the rash can spread into the mouth, and in girls, it can cause discomfort in the vagina. At first the rash is pimple-like, but quickly turns into blisters, which,

after a few days, scab over. The scabs then fall off, and should leave little or no scarring.

Chickenpox is usually self limiting with low morbidity and mortality in healthy children. However, in babies under 1 month (where the mortality rate is 20%), adults and immunocompromised children the following should be noted:

COMPLICATIONS (rarely seen in normal healthy children):

A high and prolonged fever is a good predictor of how severe the disease will be, and may be associated with severe complications:

1. Pneumonia – usual cause in adults is Staphylococcus aureas
2. Bacterial superinfection and encephalitis (rare in children)
3. Reye's syndrome, mainly associated with the use of aspirin to control fever and pain
4. Otitis media

EXTREMELY RARE COMPLICATIONS:

Osteomyelitis, necrotising fasciitis, toxic shock syndrome, Guillain-Barré Syndrome, carditis, uveitis, myocarditis, bullous varicella, septic arthritis, deep tissue abscess, Group A beta-haemolytic streptococcus, nephritis, orchitis, thrombocytopenia, fulminant hepatitis, acute cerebellar ataxia, premature labour (pregnant women only).

0.7 – 2% of births to women infected in the first 4 months of gestation lead to congenital varicella syndrome – chorioretinitis, ocular defects, cutaneous scars, hypoplastic limbs, micrognathia, encephalomyelitis, cortical atrophy, and pneumonitis[2].

Most doctors have never seen any of these, and would consider discussion of them laughable. However, lest we should be accused of being simplistic, and in the interests of total disclosure, we believe you should know all the information.

A recent American study showed that 6% of admissions for the complications of varicella were musculoskeletal disorders ranging from necrotising fasciitis to toxic-shock syndrome requiring multiple amputations[2]. Complications were not related to severity of chickenpox. Since the routine mantra from medical people to parents is 'paracetamol for fevers' despite medical literature clearly demonstrating that such advice is highly dangerous; since the majority or parents follow such advice unquestioningly; and since necrotising fasciitis has primarily been associated with people who regularly pop paracetamol and other anti-inflammatory drugs, it is hardly surprising.

IMMUNE SYSTEM RESPONSES:

Both cell-mediated (Th1) and humoral (Th2) immune responses stop the virus replication (antibody alone does not guarantee total immunity). The most important immune response is the Th1 response which is cell mediated immunity (search and destroy the virus), but the precise laboratory markers of that immunity are unknown[3] . This is why people with agammaglobulinaemia (no antibody production) usually have uncomplicated chickenpox, whereas people with defective cell-mediated (or search and destroy immunity) can die from chickenpox.

Treatment for chickenpox: (and the costs)

NATURAL MEDICINE:

Because chickenpox is a virus, vitamins A and C are the treatment of choice. The dosages required depend on the individual child. Total cost would be no more than$50.00.

Keep the skin clean and cool with frequent baths using 1 cup baking soda or 5 drops lavender essential oil in the bath water. Rubbing the juice from the fresh stems of aloe vera can also help the itching[23, 24.]

Sleep and rest with plenty of fluids is the best cure, as for all viral infections. Keep children away from others while they are infectious, especially older people, as exposure to chicken pox may bring on a case of shingles.

Aromatherapy

Add 5 drops tea tree, 5 drops chamomile, 5 drops lavender and 5 drops bergamot essential oils to 50ml rose water or chamomile tea and apply to the spots to help stop itching. Re-mix well before each application[25].

Use 2 drops lavender, 2 drops roman chamomile and 2 drops bergamot essential oils in the bath, especially for under 5 year olds[25]

Costs for essential oils vary depending on the oil. If buying essential oils, the label should always state 100% pure essential oil, the country of origin and a use by date. Do not buy fragrant oils, as they do not have the therapeutic value, being artificial substitutes in most cases. As a guide, a 10ml bottle of lavender oil will probably cost around $20.

Homoeopathy

Antimonium tartaricum – for use when the child is bad-tempered and the spots are slow in coming out. The child will have a white-coated tongue.

Pulsatilla – for use when the child is clingy and whiny with a low fever. The itch is worse for heat.

Rhus toxicodendron – use when the tongue is coated white or yellowy white and has a red tip which may be sore. The spots are maddeningly itchy and the child very restless.

Sulphur – use if the child is generally restless, sweaty and feverish and the spots are severe, very red and much worse for heat. The spots become crusty, smelly and weep after scratching. Sulphur may also be needed where recovery from the illness is slow.

Varicella 200c (nosode) – use to help clear a severe case or for lingering after-effects of the disease. *Do*

not use while disease is incubating[26, 27.]

Cell Salts

Ferr Phos – when fever, irritability and discomfort are present.

Kali Mur – After the fever has passed, usually with white or greyish white coated tongue. Spots filled with whitish substance.

Calc Sulph – where the eruptions have yellow infected-looking discharge.

Kali Sulph – use when the spots have finished coming out and alternate with Ferr Phos to promote perspiration.

Dosages: Two celloids of the required remedy every half-hour in the early stage, less frequently once the fever has subsided[28].

Costs for homoeopathic remedies and cell salts are very reasonable, usually around $5 - $10 per bottle.

PHARMACEUTICAL MEDICINE:

Zovirax (Acyclovir), foscarnet or Vidarabine for older children. Dosage = 20 mg/kg of body weight with a maximum of 800 mgs for 5 days = $170.00.

For the immunocompromised, Zovirax for 7 days intravenously minimum costs = $3,300.

For Zovirax resistant virus, foscarnet (Foscavir) 40 mg/kg IV x 10 days + $2,100. (Not FDA approved.)

Anti-histamines, paracetamol and sometimes, corticosteroids such as prednisone are used.

With regard to drug treatment, the following extract speaks volumes:

A POX ON ACYCLOVIR:

Newspapers and TV gave a big play to the supposed efficacy of huge (and expensive) dosages of oral acyclovir for treatment of otherwise normal children with chickenpox when the reports appeared a few months ago (New Engl. J Med. 1991; 325:1539). We were mostly impressed with the fact that, if you have large enough numbers of study patients, you can make clinically insignificant differences highly statistically significant. Now the report of acyclovir versus placebo for adolescents with chickenpox has appeared (J Pediatr 1992; 120:627.) Once again clinically insignificant or marginally significant differences favouring acyclovir are *statistically* significant. The dosage was 800 mg 4 times daily for 5 days (compared with 200 mg 5 times daily used for genital herpes simplex infection)[10].

Shingles:

When you have chickenpox, the immune system deals with it, not by eradicating it – because it can't, but by hemming it into the bundles of nerve cells in the spinal cord or cranium. Since the immune system cannot function here, the virus can stay safely dormant for decades until the immune system is suppressed, either through stress, age, pregnancy, cancer treatment, AIDS, primary immunodeficiency or organ transplant. Then the virus can re-appear. Sometime it re-appears as chicken-pox again[5], and repeat chickenpox has become more commonly reported. Usually though, it reappears as shingles, with some writers stating that 2 out of every 10 people who have had chicken pox experience shingles[22].

The name shingles comes from the Latin word for belt or girdle (cingulum) because the most common presentation is a band of large blister-like welts on one side of the body, on the stomach, back, chest, or in some cases on one side of the face.

Shingles usually is accompanied by photophobia (sensitivity to the light which usually accompanies viral infections of any sort), tiredness, and itchiness which drives some people frantic. Shingles in adults can leave excruciating pain which can last for years.

Children rarely experience severe pain, or systemic symptoms. I have never heard of residual pain when shingles is treated with vitamins C and A and other natural means to support the immune system to once again drive the virus back into its hidey-holes. If new lesions continue after three weeks, an underlying immunodeficiency should be investigated.

Pharmaceutical treatment for shingles concentrates solely on symptom alleviation using drugs like prednisone and acyclovir.

Healthy people usually recover from shingles with no problems. Fatalities have occurred after bone marrow transplantation[4].

Chickenpox vaccine.

Japan first started developing a chickenpox vaccine in 1974, and after a 20 year study, concluded that it was safe and effective. By 1997, the chickenpox vaccine was in phase four studies at the FDA's request, which means that the vaccine manufacturer will monitor several thousand vaccinated children for 15 years to determine the long term effects of the vaccine. (When the rubella vaccine first came out, they assured FDA that they would do the same. However, the study was abandoned with no follow-up because it was considered a waste of money).

What is in each vaccine dose, and what culture medium is it grown on?

"…VARIVAX is a preparation of the Oka/Merck strain of live, attenuated varicella virus. The virus was initially obtained from a child with natural varicella, then introduced into human embryonic lung cell cultures adapted to and propagated in embryonic guinea pig cell cultures, and finally propagated in human diploid cell cultures (WI 38). Further passage of the virus for varicella vaccine was performed at Merck Research Laboratories in human diploid cell cultures (MRC-5) that were free of adventitious agents..."

"…Each 0.5 ml dose contains the following: a minimum of 1350 PFU (plaque forming units) of Oka/Merck varicella virus when reconstituted; approximately 25 mg of sucrose; 12.5 mg hydrolysed gelatine; 3.2 mg sodium chloride; 0.5 mg monosodium L-glutamate; 0.45 mg of sodium phosphate dibasic; 0.08 mg of potassium phosphate monobasic; 0.08 mg of potassium chloride; residual components of MRC-5 cells including DNA and protein; and trace quantities of sodium phosphate

monobasic; EDTA; neomycin, and fetal bovine serum. The product contains no preservative[5]..."

Let's get clear of the obscure language. The culture medium is human embryonic lung cells (from an aborted foetus), embryonic guinea pig cell cultures, WI 38 – a different cell line from another aborted foetus, and another aborted fetus labelled MRC-5.

"…The nearly 2 m g of unmodified mammalian DNA in each dose of Varivax exceeds that present in any other approved childhood vaccine[6]*…"*

In other words, other vaccines also contain unmodified DNA, but chickenpox contains more than the others.

A medical study was done to see if any of 293 people vaccinated with Varivax developed anti-DNA antibodies from residual fetal tissue/DNA in the vaccine. The article stated that there were no significant changes in anti-DNA antibody, or the frequency of elevated anti-DNA titres.

But if these people have had other vaccines, which already have human DNA in them, and they already have anti-DNA antibodies, exactly what does "significant" mean?

The possibility was also considered that the human DNA present in Varivax might integrate into and transform the vaccinees cells. An ad hoc committee on karyologic controls of human substrates proposed limits for chromosomal abnormalities in human diploid cell lines used to manufacture biologic products. These guidelines have become:

"…generally accepted upper limits for chromosomal abnormalities. A clonal 7;12 chromosomal translocation in the MRC-5 cells used to produce some lots of Varivax exceeded these limits for structural abnormalities. To evaluate the theoretical concerns raised by this observation Merck undertook a comprehensive assessment of MRC-5 (aborted foetal) cells to document that they were not tumorigenic. MRC-5 cells from the cell banks used to produce vaccine

1. did not produce tumours when injected into nude mice
2. reached senescence normally, and
3. did not exhibit a malignant phenotype.

Moreover, cells bearing the 7;12 translocation did not proliferate preferentially during the lifetime of the cell line in comparison with MRC-5 cells lacking the translocation. No human disease associated with abnormalities involving a 7;12 translocation has been reported. Outside experts concurred with the FDA's assessment that the risk of

MRC-5 DNA's inducing a malignant transformation in vaccinees under the condition of vaccination was exceedingly low[6]..."

This information will prove to doctors that the vaccine is safe.

For those who know the history of vaccines, such information is far from reassuring. Take for instance SV40, which is the most extensively researched vaccine contaminant ever. By 1989, the experts knew that there was 40 times the amount of SV 40 than polio virus in polio vaccines, yet tests at the time of the vaccines use detected minute quantities only. Only now are we discovering how worthless the experiments in animals were, and as the list of possible links with SV40 grows, the medical people grow ever more silent.

The fact is that Varivax contains 2 ug of WI 38 and MRC-5 – two aborted foetuses. The fact is that the chromosomal abnormalities in this cell line exceed the currently accepted upper limits. The fact is that Merck undertook what they call a "comprehensive" assessment to "document that they were not oncogenic."

Was not Thalidomide comprehensively tested on just about every living organism from Drosophila flies through dogs with no bad results? And what about humans? They looked solely at one chromosomal translocation. But the history of vaccines shows that they can only look at what they know is there. The article also stated that:

"…Detectable infectious agents were not present in the material used to produce Varivax, nor were they introduced during the manufacturing process..."

The key word here is "detectable". You can only find what you have a test to identify. Fetal bovine serum, even batches previously passed by the FDA and WHO, has been repeatedly documented to be contaminated with several different viruses. And every year, new viruses come to the surface, and new tests have to be devised to test for them. The point is that there is absolutely no guarantee that these vaccines do not contain something that is unable to be detected at this time, but which more advanced testing might show up in the future. This is why the manufacturers cover themselves with the word 'detectable' – because they can only be held liable at any future date for those things which were able to be identified at the date of manufacture.

Fair enough. But is it good enough? For some doctors, of course.

Let's look at how well this vaccine has been tested.

"Pregnancy: the possible effects of the vaccine on fetal development are unknown at this time. However, natural varicella is known to sometimes cause fetal harm… the

duration of protection is unknown … vaccination should be deferred for at least 5 months following blood or plasma transfusions, immune globulin or varicella zoster immune globulin … vaccine recipients should avoid use of salicylates for 6 weeks after vaccination as Reye's syndrome has been reported following the use of salicylates during natural varicella infection … Varivax should be deferred in patients with a family history of congenital or hereditary immunodeficiency until the patient's own immune system has been evaluated … post- marketing experience suggests that transmission of vaccine virus may occur rarely between healthy vaccinees who develop a varicella- like rash and healthy susceptible contacts…"(Merck, Sharpe &Dohme, 1999)

Merck, Sharpe and Dohme are really behind the eight-ball here because, in 1997, it was reported that a 12 month old healthy boy who had 30 chickenpox skin lesions 24 days after receiving the varicella vaccine, gave his pregnant mother 100 lesions. She had an elective abortion. While no virus was found in the foetus, this case documents transmission of vaccine virus from a healthy infant to his pregnant mother. The crucial point here is that we know Th1 immunity (or search and destroy) has to be suppressed in a pregnant woman because otherwise she will lose her baby. We also know that Th1 immunity is crucial to fight chickenpox. Why then does the latest 1999 Merck, Sharpe & Dohme information still not recognise this?[20]

Varivax has not been evaluated for its carcinogenic or mutagenic potential or its potential to impair fertility. It is not known whether varicella vaccine virus is secreted in human milk. No clinical data are available on safety or efficacy of Varivax in children less than one year of age, and administration to infants under 12 months of age is not recommended.

ADVERSE REACTIONS

A total of 11,102 healthy children, adolescents and adults were followed up to 42 days.

The most frequently reported adverse reactions were:

a. Fever
b. Injection site complaints (pain/soreness, swelling, and/or erythema, rash pruritus.
c. Haematoma
d. Induration, stiffness
e. Varicella like rash

Less than 1%:

Upper respiratory illness, cough, irritability, nervousness, fatigue, disturbed sleep, diarrhoea, loss of appetite, vomiting, otitis, diaper rash/contact rash, headache,

malaise, abdominal pain, other rash, nausea, lymphadenopathy, eye complaints, chills, myalgia, stiff neck, arthralgia, lower respiratory illness, allergic reaction (including allergic rash/hives), constipation, itching, heat rash/prickly heat, eczema/dry skin, dermatitis, cold/canker sore.

In children, pneumonitis (<1%) and febrile seizures (<0.1%) have been reported rarely.

The following adverse reactions have been reported since the vaccine has been marketed:

Body as a whole: anaphylaxis

Haemic and lymphatic System: thrombocytopenia.

Nervous Psychiatric: Encephalitis, Guillain-Barré syndrome, and transverse myelitis, Bell's Palsy, ataxia, paraesthesia.

Respiratory: Pharyngitis.

Skin: Stevens-Johnson syndrome; erythema multiforme, Henoch-Schönlein purpura; secondary bacterial infections of skin and soft tissue, including impetigo and cellulitis, herpes zoster[7].

In New Zealand, the vaccine first approved here was SmithKline Beecham's Varilrix. This had to be reformulated, because Varivax and Varilrix needed to be stored at –20°C. So the vaccine used in New Zealand at the moment contains a much higher titre of virus (2,000 PFU when stored for two years), but because the initial manufacturing

titre is 10,000 PFU, this vaccine, by the time it is administered to children, is a mixture of live and killed virus. Because the comments in the 1996 edition of the Immunisation Handbook related to Varivax, we used the Varivax data sheet in this article.

For those choosing to use Varilrix, please note that the New Zealand working party did not support its use in immunocompromised people. The New Zealand article also stated:

"…There is no doubt about the ability of the Oka strain to establish latent ganglionic infection in vaccinees and later reactivate to produce clinical zoster (shingles)…" (13)

Vaccine induced immunity.

The New Zealand committee charged with looking at this issue wrote:

"…current varicella vaccine formulations are highly immunogenic in healthy children, greater than 95% of whom will develop measurable antibody and cell mediated immune responses to a single dose. Immunogenicity is clearly less in adolescents, adults and immunocompromised individuals of any age. Immunogenicity does not necessarily correlate with the protection afforded..."[13]

We know that chickenpox infection produces predominantly a Th1 cytokine response [14] and that a characteristic of naturally acquired immunity to chickenpox is a prominent Interferon g response[15] followed by a good antibody (Th2) response.

There is only one small study looking at the type of immunity gained from the vaccine, which would indicate that in general, the vaccine givesTh1 and Th2 immunity[16]. It would seem that this immunity is not quite the same as natural immunity in that there is quite a high re-infection rate after the vaccination. The antibody rates after vaccination have been noted to steadily climb, which was speculated to be a result of natural reinfection from continuing circulation of wild virus[16]. This also raises the possibility that this study has an inherent bias in that the participants could have been reflecting a mixed immunity from natural and vaccination-induced infections, and that the possibility exists that once wild virus is eliminated from the environment, it may be revealed that injected immunity is indeed significantly different to natural immunity.

So far, the studies show that 1 – 2% of those who produce high antibody levels from the vaccine will contract clinical chickenpox within 2 yrs of being vaccinated, and 4 – 7% of those with moderate titres also experience chickenpox[8] and can infect their exposed siblings[9]. Also interesting is that vaccinated children with asthma or other

reactive airway diseases are 710% more likely to contract chickenpox than vaccinated children without reactive airway diseases[12]. As usual, the medical profession maintains that infection following vaccination is milder than that following wild infection.

(At this point I would have to point out that this is a generalisation, since our unvaccinated children had milder doses of chickenpox than our vaccinated pre-school grandchildren!)

Surveillance studies have demonstrated that the vaccine induces antibody responses that persist for at least 20 years[17, 18] . These studies are reminiscent of those studies which were cited to convince parents that one shot of measles vaccine would give life-long immunity, when they too obtained their long-term immunity from wild-virus natural boosters. At least one study[16] indicates that this is what is also happening with the chicken-pox vaccine, so it would appear that long-term immunity will only be possible so long as wild-virus continues to circulate. Given that extensive use of this vaccine could disrupt natural circulation of varicella virus, there is a very real possibility that chicken-pox could become an adult disease with its 5 – 10% higher risk of severe or complicated chickenpox than that experienced by children.

If this were so, then the only way to maintain life-long immunity would be through life-long booster shots.

The question then must be asked, Why would anyone want to vaccinate children against a disease which in healthy children, is no problem? Because for some people it is a problem, and ironically, they are the ones who can't have this vaccine.

	Children	Adults
Hospitalisation (general)	10/10,000	127/10,000
Varicella pneumonia	1.3/10,000	27/10,000
Encephalitis	0.9/10,000	3.3/10,000
Varicella deaths	0.15/10,000	3.1/10,000[6]

An interesting article in the British Medical Journal goes through the medical reasons to apply universal vaccination, and comes to the conclusion that the benefits of mass vaccination accrue only to immunocompromised children:

"A programme of universal immunisation to benefit immunocompromised children would require doctors to ask parents to authorise the immunisation of their children not for their own benefit but for the benefit of their less fortunate classmates. Parents would be asked to place their children at potentially increased risk of primary chickenpox as adults. This is compulsory altruism. Given that we do not compel adults to serve as kidney or even blood donors, it seems unfair to require children to be "splendid Samaritans". This also contradicts the "best interest of the child" standard, which is the usual guiding principle for parental decision making"[11].

The article goes on to point out that vaccination is not cost effective in terms of health costs alone, and may even underestimate the costs since they do not factor in possible increases if universal immunisation delays disease until adulthood. This would include both medical costs for complications, and cost of time off work for the adult concerned. It only becomes of benefit in terms of working out the cost of parents being off work, which is not what I call a "benefit/risk" equation. The New Zealand Committee however, quoted a study from Dunedin which estimated that every dollar spent on the vaccine would make a "return" of $2.70[13] – actual method (health or work related costs?) was not specified.

So, what are the disease figures/risks in New Zealand? In 1995, I tried to investigate the statistics for New Zealand after being alerted by a reporter from Consumer magazine that the Health Department had changed its classification procedures, and Consumer magazine decided in the end to not even publish them. Why? Because there was a big increase in hospitalisation statistics for 1992 – 1993, which, when Consumer investigated, was found to be due to a changed in classification. Prior to 1992, a person was classified as being "admitted" if they went in overnight. In 1992, the classification "admitted" was changed to mean someone who had spent more than 3 hours loitering in the hospital building. These days, with the speed at which the medical machine seems to work at times, that could mean almost everyone! I noticed in the 1998 New Zealand article quoted before[13] that definition changes resulting in the increase shown in their published data (confirmed to me by Tracey Stewart from the MOH in 1995) was neither mentioned, nor discussed.

CONCLUSIONS

As far as American doctors are concerned, this vaccine is the next best thing to sliced bread – safe, effective, with no side effects. As far as American doctors are concerned, Acyclovir is the drug of choice.

Having detailed what chickenpox/shingles is, current thoughts on treatment, what is in the vaccine, it's immunity, some of what manufacturers have printed about its side-effects, and what some doctors have said, it is up to you to decide what you want to do.

But before you do, go back and re-read the quote in the box called 'A pox on Acyclovir'. Remember that there are as many lone, unheard voices who have much the same to say about studies on the chickenpox vaccine, as this dissenting editorial board had to say about how to make statistically insignificant figures appear as if they save the world from a poxy disaster.

A final quote is worth considering:

"…Everywhere we see people wondering how many of the claims of biological sciences are truly valid (even within their own biological frameworks), and *how many result from too simple approaches to complex phenomena, methodological pitfalls, fragmentary knowledge, fierce competition, and publication biases*. It certainly has become customary to read about findings stemming from studies whose subjects (or just samples) came from a biased or unknown origin. Such studies get published in basic science or medical journals, and then enjoy some more or less ephemeral attention. Until they are quietly refuted by population-based designs. In the meantime of course, unnecessary anxieties, reassurances and expectations are raised in the public conscience, and *dubious cultural constructs are down loaded in our collective imageries*[19]. (Emphases mine)

These last ten words refer to a situation which, I believe, has been created around immunisation as a whole. It is a grossly imprecise technology, which centres solely on antibody production, dubious concepts, and estimated risk/benefit equations, which are usually re-worked, until something worth talking about is theorised.

Until recently, just HOW vaccines might skew immunity or change epidemiology had not been considered relevant. Yet, this is the most crucial factor in vaccination, and the medical profession's ignorance of it and their refusal to consider this, has been the basis of our consistent protests to them over the years.

On September 28, 1999, Mr Thomas E Balbier, Jr, Director of the National Vaccine Injury Compensation program stated to the Senate:

"There are more than 300 vaccines in various phases of research and development, some of which may eventually be added for coverage under the Program and result in increased liability" (pg. 6 published testimony).

There needs to be clear and ongoing debate not only on the difference between the medical definition of "essential" and the Wall Street share market definition of "desirable", but also the immunological impact over generations of the use of vaccines. My personal conviction is that in human terms, while chickenpox is for some people fatal, the very people "required" to have the vaccine are those who don't need it, who, as so eloquently put in the British article, are required to take a risk in order that immunocompromised people can be "protected".

This is, in my opinion, medicine gone mad.

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Hand, foot and mouth disease

Hand, foot and mouth disease is nothing to do with the cattle disease, foot and mouth. It is a viral disease caused by the Coxsackie viruses. It is most common in the summer months and is usually seen in pre-schoolers, although older children and adults can get it. The incubation period is about 3 – 7 days and it often occurs in mini-epidemics in pre-schools. The virus is transmitted by direct contact with nose and throat discharges and faecal contact.

Children may be listless and off colour and may complain of a sore mouth before the onset of the blisters. They may also have a fever for about 24 hours. The blisters are small and greyish and occur in the mouth, including the edge of the tongue, and on the hands and feet. In bad cases, they may spread up the legs or arms and sometimes the buttocks. Do not attempt to pierce the blisters, they will dry up and heal on their own without any scarring. The blisters persist for about 7 – 10 days.

Keep children away from contact with other children until the blisters have all dried up. Take special care with toilet hygiene as the virus is excreted in faeces for several weeks. Children who have had an attack, even a mild one, acquire a life-long immunity. The virus apparently causes no problems in pregnant women and most pregnant women will have had the disease as children and acquired immunity. If a pregnant woman has hand, foot and mouth disease, it is thought she will pass antibodies to the foetus and so the baby will be protected. The main problems are infections in newborn babies, which can be more serious, so keep newborn babies from being in contact with other infected children, if possible.

[Vaccination] [Hilary Butler]