VACCINES: MENINGITIS C VACCINE
A LOOK AT THE DISEASE &: THE NEW JAB

THE MENINGOCOCCUS

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The meningococcus (otherwise known as Neisseria meningitidis) is a bacterium that lives up the nose and in the back of the throat of humans. It is spread by coughs and splutters, not by clothing or bedding. At any one time, up to one in six of us carry it in our nasal passages without any particular symptoms. When occasional cases of meningococcal DISEASE occur, this 'carrier' rate may rise to one in two people, in times of epidemic DISEASE, all of us may carry it. I emphasise DISEASE because most of us clear the meningococcus on our own over a period of a few months, some people even carry it for years with no symptoms.

There are many different sorts of meningococcus called groups. These are based on differences in the outer coating. They range from A-Z. Those known to cause disease are groups A, B, C, W135 and Y. Once you have 'carried' any of the meningococci, you develop protective antibodies to ALL of the groups. If you are unfortunate enough to get DISEASE - when the meningococcus leaves the nose or throat and INVADES the blood stream (SEPTICAEMIA) or the brain or spinal cord (MENINGITIS) - then you only gain immunity to that PARTICULAR group or strain (subdivision of a group).

What is the biggest factor determining whether the meningococcus up your or your child's nose decides to INVADE or not? The state of your or their IMMUNE SYSTEM.

Other things that make a lesser difference are the strain virulence (nastiness), factors that spread the meningococcus from the throat and nose (e.g. a 'flu epidemic'), and overcrowding associated with poverty (1) , young military recruits and university halls of residence. (2)

Most people who get DISEASE do not get it from someone else with DISEASE, they get it from an asymptomatic carrier (3) . This makes it very difficult to know whom to treat with antibiotics to stop passage of DISEASE. In fact, unbridled use of antibiotics in schools and communities of those with DISEASE may impair the bodies' ability to actually develop immunity to the meningococcus as well as creating widespread resistance to antibiotics for those who really need them (4) .

The highest incidence of meningococcal DISEASE is in children -boys- aged six months to one year - and in the winter. Most adults have protective antibodies. Earlier this century a lot of DISEASE was caused by group A. From the 1960's most DISEASE was caused by group B. What has changed dramatically in the last ten years is the percentage of cases of DISEASE caused by group C. It is up from 30% to 40%. It is causing more DISEASE in older age groups, especially 15 to 24 year olds in whom the death rate is higher (15% of those with the DISEASE compared to 5% in infants less than one year) and there are more cases of SEPTICAEMIA (up to 70% in one series of deaths (5)).

WHY WOULD THIS BE HAPPENING?

Certainly being a university student is not the only factor. Dr Keith Neal of Nottingham University surveyed 75 universities over three years. He found that some reported no cases and some had a very high incidence, up to 40 cases per 100 000 students (the national rate for non students of this age is 5 per 100 000 people). He thought that living in halls of residence as opposed to home could be a cause. But the risk is still very low, and most cases are still group B. (2)

What has been happening to these people's immune systems over the last ten years or so? What would make them weaker and more susceptible to invasive disease? I certainly think that the load of

vaccines we are now giving children is not helping to strengthen their immune systems, if anything, I think it is weakening them - never mind the other side effects that may or may not be attributable to them. Certainly the MMR (measles/mumps/rubella) vaccine was introduced in 1988. These are three live viruses one of which (measles) either in disease or vaccine form is known to depress one type of immunity called 'cell mediated' for a while. To give two other live viruses at the same time and bypass all the bodies' natural defenses -skin and the lining of the gut and air passages - with a needle can only be described as 'risky'. On top of this, we had the Measles Rubella Campaign in 1994 when about seven million five to sixteen year olds were vaccinated - some for the second and third time against measles. These are the people who are going through university now. They will have also had another dose of Tetanus and Polio vaccine just before starting.

When I heard about the 14 year old boy who died of group C meningitis I remember wondering how soon beforehand he had had his BCG vaccination (another vaccine with a 'live' organism).

How can we make it less likely that a meningococcus that our child is 'carrying' will invade the blood or brain? By making sure that our child has a good diet, lots of fresh air, exercise, sleep and love. When our child gets coughs and snuffles, don't let them have unnecessary antibiotics, don't suppress their symptoms with paracetamol or antihistamines (so prevalent in over the counter cough medicines). Instead, nurse them through these illnesses with plenty of fluids, avoidance of dairy products, rest and supportive therapies, such as homeopathy. They will then come through the episode stronger and fitter rather than weaker and damaged.

(top)

THE NEW VACCINES AGAINST MENINGOCOCCUS C

The new vaccines against meningococcus C are 'killed vaccines' (the organism in it is dead) and have been developed using the same technology as that used to make the Haemophilus Influenza B (Hib) vaccine. A vaccine against meningococcus groups A and C and another one against groups A,C,Y and W135 have been available for years. They only produce antibodies for about three years and then only in those above 18 months of age.

In March 1997 we were told that, "trials of two group C meningococcal vaccines had produced very good antibody responses." (6) A third trial was to be undertaken in Gloucester.

In November 1998 Dr Elizabeth Miller, Head of Immunisation at the Communicable Diseases Surveillance Centre presented results of Government funded trials. She said:

'"A three dose schedule of the conjugate (new) vaccine at two, three and four months was highly immunogenic and had an excellent safety profile" (7) .

In the Oxford Vaccine Group study, 248 infants were vaccinated at two, three and four months while a control group received hepatitis B vaccine. At five months, 100% of infants had developed greater than 2mcg/ml of antibody. In a separate Government funded trial (no numbers mentioned, no follow up mentioned) 99% achieved putative protective antibodies. Public Health Laboratory researchers carried out a trial on 227 children aged 12-17 months to see whether one dose would be enough to provide long term protection for older children. One month later, 94% had putative protective levels (8) .

In August 1998, 300 children in Ironville, Derbyshire were given the unlicensed vaccine. Professor Cartwright, Group Director of the Public Health Laboratory Service South West defended its unlicensed use. He said that the village had had three outbreaks of meningitis C in three years.

"Previous interventions with prophylactic antibodies and the old, non conjugated vaccine have failed." (9) By July 1999 it was being said in the British Medical Journal that,

"The new vaccine, unlike the existing one, provides long term protection." Dr Elizabeth Miller who has been coordinating the vaccine trials said that the vaccine had been given to 4500 children in the

UK some of whom had been followed up for five years. Frank Dobson, the health secretary said that the new immunisation program should start in October 1999 and expand as rapidly as manufacturers could supply vaccine" (10) .

A letter in July 1999 from the Chief Medical Officer to all doctors said that the new vaccine is immunogenic in children from two months of age and appears to induce immunological memory so that further boosting is likely not to be needed (remember, they said that about MMR which is now given three times in the USA). The recommended schedule is: three doses from two months; two doses from four months to one year and one dose after that.

"The new vaccines have been extensively tested by the manufacturers and the Public Health Laboratory and have been found to have excellent immunogenicity and safety profiles in all ages (11) .

IMMUNOGENICITY

When they say immunogenicity what they actually mean is antibody levels. Antibody levels are not the same as IMMUNITY. The recent MUMPS vaccine fiasco in Switzerland has re-emphasised this point. Three mumps vaccines—Rubini, Jeryl-Lynn and Urabe (the one we withdrew because it caused encephalitis) all produced excellent antibody levels but those vaccinated with the Rubini strain had the same attack rate as those not vaccinated at all (12) , there were some who said that it actually caused outbreaks.

LONG TERM

This usually means a few weeks, in vaccines it has been as little as weeks. As Dr Miller said, some of the children had been followed up for five years.

SAFETY

Well, it depends what you mean by safe. Most reactions that occur after vaccinations are dismissed by doctors and public health officials as not causally related. There are many other areas in medicine when we accept things without knowing how they are causally related, for example, the sedative effect barbiturates, the antidepressant effect of antidepressants and the anti psychotic effect of major tranquilizers. The fact that administration of the drug is associated with the desired effect is sufficient to grant it a product license. However, when it comes to adverse effects the reverse seems not to be true. Drug companies and officials trot out the old ‘lack of causality’ to people’s concerns (13) .

The other good old chestnut is no evidence. Remember it from the BSE disaster?

There is no evidence to show...." No evidence is exactly what it says it is - no evidence. If you don’t do the right research you won’t get the evidence either. The Measles Rubella Campaign of 1994 was a golden opportunity to set up prospective recording of side effects but this was not done, nor with the Hib vaccine. The manifestly unsuitable ‘Yellow Card’ system was used. There will undoubtedly be no prospective recording of side effects after the introduction of this vaccine either.

You may notice that the control group in one of the three trials of this was children who were vaccinated with Hepatitis B - it is hardly a control to use a substance about which there are already plenty of concerns.

Two years ago, the Department of Health was said to be resisting pressure to introduce blanket meningitis vaccinations for university students, "The problem is that several hundred thousand students would need to be vaccinated when the incidence of the disease is actually very small" (14) . One year ago, Southampton Local Medical Committee chairman Nigel Watson said that they advised against routine vaccination of 8000 new students as there was, "No clinical evidence to support it." (15)

What have GPs been saying about the new vaccine? They mostly seem to be worried that the new vaccine is going to be introduced without the Department of Health's paying them any extra money for giving it. Certainly, there have been many more pages devoted to the financial implications to GPs than there have to the safety profile to recipients.

Would I use this vaccine on my children? No.

Dr Jayne L M Donegan, 6/10/99

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