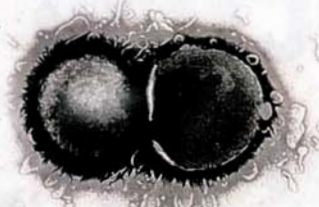


ON THE FRONTLINE IN FIGHT AGAINST MENINGITIS



Meningitis claims the lives of more than 300 people every year. Despite a successful vaccination against the C strain of the disease, the B strain continues to be a major threat – especially to babies and teenagers. Now Downend charity Meningitis UK has awarded more than £150,000 to Bristol University researchers, who will use the funds to try to find a vaccination against meningitis B. Health reporter KATHARINE BARKER spoke to Professor Robert Heyderman at the university, who aims to take the next step towards eradicating one of the biggest threats to our children.

It is the speed with which meningitis attacks the body that makes it such an aggressive and unpredictable disease, and one that is feared by parents.

Like lots of bacteria, the meningitis organism lives in the back of the throat and is harmless until released into the blood stream. But within hours of it striking, meningitis manifests itself in vomiting, drowsiness, a stiff neck and aversion to light – as well as a tell-tale rash in some cases.

Not everyone gets all these symptoms and they can appear in any order – making it even more crucial that meningitis is caught as early as possible.

If not caught, meningitis can lead to a coma, disability and, in the most severe cases, death.

One of the reasons it is so difficult to eradicate meningitis is because it is present in so many forms.

It is the bacterium meningococcus that can lead to meningococcal meningitis C and B, an inflammation of the lining that covers the brain and the spinal cord, or meningococcal septicaemia, when it gets into and poisons the blood.

Pneumococcus is a different bacterium, which also affects the brain and the blood. It is rare but more severe.

In 1999 a breakthrough vaccine for meningitis C was introduced – helping to all but stamp out the strain.

The Department of Health is planning to introduce a vaccine for pneumococcal meningitis next year. But these vaccines do not protect against all forms of the disease and now researchers at Bristol

I was told that I would not see a vaccination in my lifetime. But I have been encouraged by the meningitis B vaccination in 1999. I am very optimistic that we will see vaccination for meningitis B in 10 years

Professor Robert Heyderman



University have been given more than £150,000 for a three-year project to extend its vaccine-related work and try to improve immunity against meningitis B – the prevalent strain of the disease.

The funds have come from the Bristol-based James Tudor Foundation and have been awarded to the university by Downend charity Meningitis UK.

Meningitis B is common among babies and teenagers but can strike anyone at any age.

Although a rash is commonly associated with meningitis B cases,

50 per cent of cases will not show a rash – making it harder to identify.

Robert Heyderman, professor of infectious disease and international health at Bristol University, said the project was the next step towards a breakthrough vaccination.

The aim of the study is to target the organism while it is still in the throat and stop it before it reaches the bloodstream.

"We are trying to find the right approach for vaccination," he said. "The bacterium that causes meningitis lives in the back of the throat and is carried by up to 40 per

cent of the population at any one time.

"We think that this bacterium is contracted every now and again, each time developing an immunity. So that by the time you reach adulthood you should be immune.

"But children who have not had the time to develop the immunity are more susceptible.

"What we are trying to do is to mimic that natural vaccination to stop the organism in the throat and provide it in a jab.

"Most vaccinations cause immunity in the blood but we are

trying to design a vaccination for the throat as well as the blood."

Professor Heyderman said that, if the vaccination was a success, it would herald the beginning of the end for the disease.

He said: "We hope the vaccine will be good enough to provide some immunity.

"By finding a vaccination we could start to remove it from the population by lowering the number of people who are carrying the bacteria in their throats."

The project will begin in the next few weeks and vaccination trials



Insight: Professors Mumtaz Virji and Robert Heyderman with their two research teams at Bristol University



Son's death 'not in vain'

MOTHER Rachael Borthwick, pictured right, from Dursley understands the importance of eradicating meningitis.

She lost her son Oscar Stewart, left, to pneumococcal meningitis at Bristol Children's Hospital last year when he was only eight months old.

Tomorrow is the anniversary of Oscar's death and in the past year Rachael has campaigned to raise awareness of meningitis and the need for vaccinations for all forms.

She welcomed the prospect of a vaccination for meningitis B.

She said: "Anything that is an improvement and can give a baby a chance of life is great news.

"Since Oscar died we have done as much as we can to raise awareness in the hope that his death was not in vain."



will begin by the end of the year. A vaccine will be delivered through the nose rather than as an injection and so eliminate the risks of using needles in third-world countries.

Professor Heyderman said that wiping out meningitis entirely was not the aim of the project, which sought instead to take a step in that direction.

He said: "Eradicating meningitis will not be the outcome of this project but it will help to move our understanding forward and develop the way people are vaccinated.

"The project is about providing

pieces of a puzzle that will amount to a breakthrough."

Funding from the project came from the Bristol-based James Tudor Foundation.

The foundation awarded the grant of £153,488 to Meningitis UK after it invited scientists to make applications for grants for research projects.

Meningitis UK has a single focus – to find a vaccine to eradicate meningitis and meningococcal septicaemia.

In the absence of a vaccine to protect against all forms of the

disease, Meningitis UK also provides a wide range of material to the public to raise awareness of the common symptoms and the importance of prompt treatment, in the hope that more lives can be saved.

Meningitis UK relies entirely on charitable donations, so raising funds is crucial in enabling the charity to continue working towards preventing these diseases.

The charity's chief executive Steve Dayman, lost his 14-month-old son Spencer in 1982 to meningitis and meningococcal septicaemia.

He said he felt confident that a vaccination for meningitis B would be found within 10 years.

He said: "Twenty-three years ago very little was being done and scientists had to rely on charitable donations.

"I was told that I would not see a vaccination in my lifetime.

"But I have been encouraged by the meningitis C vaccination in 1999.

"I am very optimistic that we will see vaccination for meningitis B in 10 years but it is still a very big challenge."

Disease strikes quickly

THERE were more than 2,300 cases of meningitis and meningococcal septicaemia provisionally recorded in the UK in 2005, 29 of which were in the Bristol area.

Every year more than 300 people die from meningitis and meningococcal septicaemia and hundreds are left with permanent disabilities.

The majority of people with meningococcal septicaemia develop a rash. The rash of tiny red 'pin prick' spots develop rapidly into purple bruising marks.

To identify the rash, press a glass tumbler against the spots. If the rash does not fade when the glass is pressed on, it could be meningococcal septicaemia. If this is the case go straight to your GP or nearest casualty unit.

It is important to remember that it is more difficult to detect the rash on dark skin. Get a friend or family member to check in your inner eyelids or lighter parts of your body, including fingertips, to see if the rash is present.

In some cases a rash will not appear so it is important to look for other symptoms which include:

- Floppy body
- Fever and vomiting
- Confusion and drowsiness
- Cold hands and feet
- Rapid breathing
- Joint and muscle pain
- Diarrhoea
- Severe headache
- Stiff neck
- Dislike of bright light
- Stiff body or jerky movements