

Resurgence of mumps orchitis among teenage boys and young men

Urologists at a leading Irish hospital have reported an alarming increase in the number of teenage boys and young men developing mumps orchitis, in a paper published in the April issue of the urology journal *BJUI*.

They are urging colleagues to offer the MMR vaccine to unvaccinated males in the 15-24 age group and educate them about the condition, which causes one or both testicles to swell and can lead to fertility problems.

Mr Niall Davis, a Urology Research Registrar, teamed up with colleagues at the Mater Misericordiae University Hospital, Dublin, to carry out an extensive review of five decades' worth of research and statistics.

'Boys who did not receive the measles-mumps-rubella (MMR) vaccine during the mid 1990s are now collecting in large numbers in secondary schools and colleges and this provides a perfect breeding ground for the virus' he says.

The orchitis factor

'It's estimated that as many as 40% of males who develop mumps after puberty can suffer from orchitis. This is of considerable concern as epidemics of mumps orchitis are now being reported more frequently in many countries worldwide.'

During the pre-vaccine era, mumps was most likely to affect children aged between five and seven, with epidemics happening every four to five years. Globally 290 cases per 100 000 population were diagnosed between 1977 and 1985. Since the introduction of the MMR in 1968, there has been a dramatic reduction in cases, with the USA reporting a 99% fall.

But 15 years ago there was a global shortage of the MMR vaccine and media scares about links to autism, inflammatory bowel disease and Crohn's disease led to reduced uptake, despite subsequent reviews that concluded that such links did not exist.

In some urban parts of the UK, uptake fell from 91% to 58% and public concern linking MMR to autism still remains high.

'It is those unvaccinated boys that we are now seeing in our urology department' says Mr Davis. 'It's estimated that as many as 42% of patients with mumps experience at least one complication. As well as swollen testicles, these can include inflammation of the ovaries, aseptic meningitis, acute inflammation of the brain, deafness and pancreatitis.'

'The recent resurgence in the disease means that a significant proportion of 15 to 24 year-olds living in heavily populated environments are affected.'

Key findings of the review include:

- Up to 50% of males with mumps orchitis will experience testicular atrophy, where one or both testicles reduce in size.
- Infertility is rare, but subfertility can occur in about 13% of patients, even if their testicles have not reduce in size.
- Up to half of patients can experience abnormal sperm for up to three months after recovery and 24% of adults and 38% of adolescents can still have abnormal sperm up to three years after recovery.
- There appears to be a direct link between high levels of testicular swelling and increased sperm abnormalities.
- Mumps orchitis, with reduced testicular size, has been suggested as a risk factor for testicular cancer, but this association appears to be weak, with an incidence of 0.5%.

'Unvaccinated males in the 15-24 year-old age group are more susceptible to virus outbreaks and have a high risk of developing mumps orchitis and long-term fertility problems' concludes Mr Davis.

'It is important that clinicians are aware of this epidemiological shift and the resurgence of mumps orchitis. They also need to ensure that male patients in this high-risk group are vaccinated and educated about the risks and complications of the virus.'

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