

Use

The influenza virus is an important world-wide cause of serious upper and lower respiratory tract infection which can occur at any time of year, but peaks in the winter months. It is a rare cause of CNS infection.

Influenza

Epidemics of influenza, or flu, occur every winter, and the most prevalent sub-type varies from year to year making annual immunisation the only way to provide near-certain protection. Currently available vaccines are trivalent, containing two subtypes of influenza A plus one type B virus. These have provided 70–80% protection, after 10 to 14 days, from strains that are well matched for those in the vaccine in recent years, and provided protection that lasts about a year. Should a new A subtype emerge with epidemic potential, a monovalent vaccine against that strain might be thought necessary. Children under 5 (and especially under 2) years old are the most likely to become infected, but it is adults over 65 who are more likely to become seriously ill if they do become infected – the risk being 18-fold higher for those over 85. Women are at slightly more risk during pregnancy, and can occasionally become rapidly unwell. A live attenuated vaccine and an intranasal product are available in some countries but not, as yet, in the UK. Vaccination is not contra-indicated during lactation.

Indications for giving the inactivated vaccine

Pregnant women: There is good evidence that vaccination is safe during pregnancy and can also provide the baby with significant short term protection from infection by viral strains against which the vaccine is active.

Children at least 6 months old: These children can be offered the current trivalent inactivated vaccine just before each annual epidemic begins. Ideally two 0.25 ml doses should be given at least 4 weeks apart the first year that vaccination is offered. A single dose is adequate in subsequent years. All such children are considered eligible for annual vaccination in America, but in the UK annual vaccination is usually only offered to children if they have asthma or some other major long term medical problem, or are the sibling of such a child.

Contra-indications

Flu vaccine can be given at the same time as other live or inactivated vaccines, but preferably into a different limb, and certainly at least an inch away from any other injection site. Minor illness, with or without fever; does not make vaccination unwise. Anaphylactic reactions are rare, but a mammalian cell, and not a hens' egg, based product *must* be used if there is a history of egg allergy or of an adverse reaction to any earlier vaccine product.

Documentation

Record the batch number and the site of vaccination in the case notes, and tell the family doctor as well if vaccination is undertaken in a hospital setting.

Protecting children <6 months old.

The manufacturer has not yet sought permission to advocate use in children less than a year old, but growing experience of its use in the most vulnerable 6–12 month old babies. Efficacy is likely to be progressively more limited in babies younger than this. Maternal vaccination during pregnancy does provide some short-term protection. The most effective oral antiviral drug currently available is oseltamivir, the usual adult dose being one 75 mg capsule twice a day for 5 days, to be started just as soon as there are clear symptoms. Pregnancy is *not* a contra-indication. If the aim is to offer **treatment** start this within 48 hours of the onset of symptoms regardless of vaccination status, and give a dose twice a day for 5 days, the generally recommended dose being 2 mg/kg (often simplified to 12 mg in children less than 3 months old, 18 mg in babies 3–5 months old, and 24 mg at 6–12 months). Reduce the dose in renal failure. There is also some limited support for **prophylactic** use in particularly vulnerable unvaccinated babies who are known to have been exposed to the virus. Give these babies the same dose of oseltamivir once a day for 10 days.

Supply and administration

A range of vaccines become available annually for about £5 in 0.5 ml prefilled syringes (and 0.25 ml syringes in America). Shake well before use, and give deep IM into the anterolateral aspect of the thigh (or deltoid in adults). The recommended dose for children less than 3 years old is 0.25 ml. Store all products in the dark at 2–8 °C.

75 mg capsules of oseltamivir, (Tamiflu®) cost £1.60, and use is considered safe during pregnancy. The only liquid product currently available in the UK comes in 20 ml bottles and contains 15 mg/ml of oseltamivir.

References

See also the full UK web site guidelines ☒

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