Aciclovir prophylaxis after varicella zoster exposure in pregnancy

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In the UK, recommendations for varicella zoster (VZ) vaccination limit its use to certain key groups including non-immune healthcare workers, some laboratory staff and immediate family members of immunocompromised patients. As it is a live vaccine it should never be given during pregnancy. VZ vaccination is not part of the UK national immunisation programme, despite evidence from other countries of a reduction in chickenpox morbidity and mortality, and in congenital and newborn varicella following introduction of a universal vaccination programme.

Although the vast majority of people living in the UK develop natural immunity after mild childhood illness, around 10% of the adult population is not immune, and adults arriving from some countries have lower likelihood of immunity to VZ. Current national guidelines recommend pregnant women with neither previous VZ infection nor vaccination against VZ to avoid exposure and seek post exposure prophylaxis (PEP) if exposure does occur.

Chickenpox is a potentially serious and life-threatening illness for non-immune pregnant women. There is also a significant risk to newborn babies whose mothers develop chickenpox from 4 days before birth and up to 2 days after birth and up to 50% of these newborns develop varicella infection; mortality from severe disseminated disease can occur. Fetal varicella syndrome includes dermatomal scarring, ocular and neurological abnormalities, and limb defects; it affects up to 0.5% and 2% babies whose mothers develop chickenpox in the first trimester or second trimester, respectively. Non-immune pregnant women have been included in the UK VZ post exposure prophylaxis (VZPEP) programme since the 1980s, with the aim of reducing severity of maternal, fetal and neonatal infection. Estimates in the UK suggest that each year there are up to 2000 maternal infections, 10 babies born with evidence of fetal damage and 30 babies at risk of severe neonatal infection. The initial VZPEP programme recommended VZ immunoglobulin (VZIG), a pooled donor blood product administered intramuscularly within 10 days of exposure. However, there are several concerns about VZIG, including long-standing intermittent supply problems and theoretical risks of bloodstream infection.

In April 2022, the UK Health Security Agency (UKHSA) published new guidelines on PEP for varicella or shingles. For all susceptible pregnant women at any stage of pregnancy, oral aciclovir (800 mg four times a day for 7 days) or oral valaciclovir (1000 mg three times a day for 7 days) are recommended as the first choice options for post exposure prophylaxis. Treatment should start on day 7 from first contact (or by day 14 if presentation is delayed). There are a few individual circumstances where VZIG may still be preferred, including malabsorption from active inflammatory bowel disease, hyperemesis gravidarum and severe renal impairment. Antiviral VZPEP shows similar efficacy to VZIG in reducing severity of maternal infection. It is easier, quicker and more reliable to obtain, is not a blood product and rarely causes serious adverse effects. Although this indication is off-label, it is recommended by an expert working group from Public Health England and UKHSA. Information on the safety of aciclovir in pregnancy is available for clinicians and the public from the UK Teratology Information Service.

Although the recommendation to use antiviral VZPEP during pregnancy was changed in 2022, not all resources for clinicians reflect this. While the British National Formulary has been partially updated, neither the ‘Green Book’ (Immunisation against Infectious Diseases) chapter on varicella nor the Royal College of Obstetricians and Gynaecologists guideline on management of chickenpox in pregnancy include this new guidance and both continue to recommend VZIG. It is important that healthcare workers and those who are pregnant are aware of, and have access to, the most up-to-date information on the management of postexposure prophylaxis for VZ in pregnancy. It is of concern that national guidelines for VZPEP contain conflicting information and that there is not the electronic capacity to update and link to each other automatically. We need better systems to ensure that clinical guidelines and reference documents are rapidly updated to include the latest advice.

Competing interests None declared. Refer to the online supplementary files to view the ICMJE form(s).

Provenance and peer review Commissioned; externally peer reviewed.

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DOI: 10.1136/dbt.2023.000001