Journal of Cystic Fibrosis 13 (2014) 353–354

www.elsevier.com/locate/jcf

Letter to the Editor

Susceptibility to varicella zoster of children with cystic fibrosis

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Received 27 January 2014; received in revised form 28 January 2014; accepted 28 January 2014
Available online 16 February 2014

Keywords: Cystic fibrosis; Chicken pox

Varicella zoster virus (VZV) infection can result in significant morbidity in patients with cystic fibrosis (CF), and the risk of severe pulmonary complications rises with age [1]. This is a greater concern in those receiving systemic corticosteroids, which in the case of CF is most often given for acute allergic bronchopulmonary aspergillosis (ABPA). Severe complications such as pneumonitis, secondary bacterial infections, and liver failure may occur despite prompt treatment with antiviral agents. The seroprevalence of VZV antibodies in CF children is unknown, although in the general population >80% of children over 6 years of age have evidence of immunity [2]. We aimed to investigate the seroprevalence of VZV antibodies in children attending our large paediatric specialist CF centre, whether or not there was a history of chicken pox.

In 2011 we started routine testing for VZV antibodies in 6 year olds at their annual review. This age was selected in view of the low prevalence of ABPA under that age and the chance that children would already have had chicken pox. Evidence of immunity to VZV was determined by VZV IgG antibodies ≥0.9 IU/L (measured by a VIDAS VZV IgG enzyme-linked fluorescent immunoassay). In 2012 the prevalence of ABPA in our CF clinic was 9%, 96% of which was aged 6 and above. As this was a new policy, we also tested older children in order to cover the whole clinic. We identified all children in our CF clinic aged ≥6 years at August 2012, and collected data on

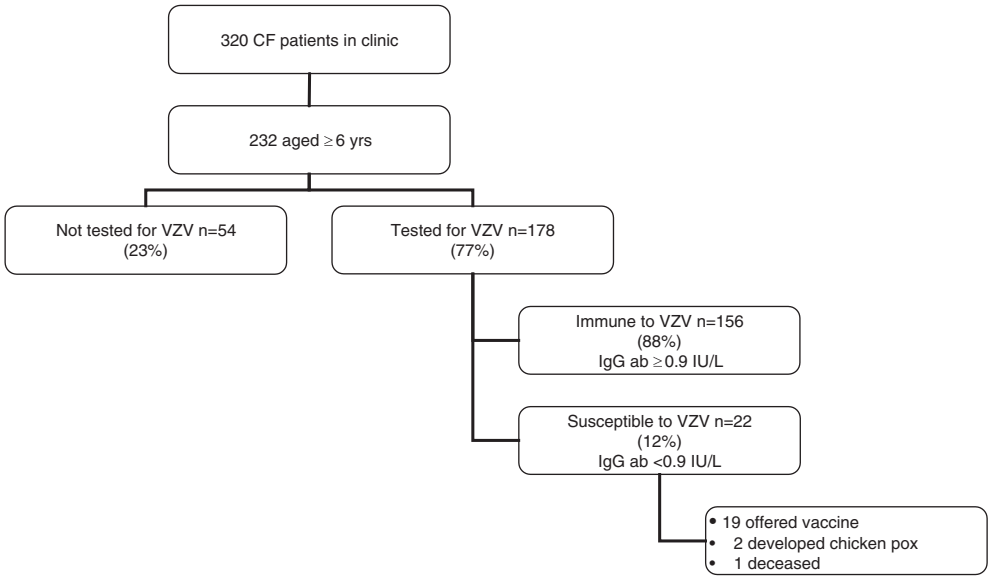

Fig. 1. Results of VZV antibody testing in CF children aged 6 years and above.

http://dx.doi.org/10.1016/j.jcf.2014.01.012

VZV immunity 12 months later, thus ensuring that children aged ≥6 years at the initial time-point would have had an annual review. We asked general practitioners to vaccinate patients with a negative result.

There were 232 patients aged ≥6 years. 178 patients (77%) in this cohort had been tested for evidence of VZV immunity within the year. Of these, n = 22 (12%) had no evidence of VZV antibodies and were therefore susceptible to chickenpox (Fig. 1).

In our paediatric CF population, the prevalence of VZV antibodies was similar to that reported for the general population. However, unlike the general population, children with CF are at greater risk of serious complications from varicella infection. In contrast to other groups of patients with chronic diseases whose treatment may result in immunosuppression, there is no UK-wide specific recommendation for VZV immunization in CF. Vaccination against VZV before immune compromise has been used as a strategy to prevent VZV complications in patients starting immunosuppressive therapy [3]. We suggest screening for VZV antibodies in children with CF at 6 years and offering vaccination for those found to be seronegative.

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