The future for lung disease in children

Warren Lenney

Chest physicians and respiratory paediatricians must work closely together to prioritise areas of respiratory research

The textbook space dedicated to specific diseases usually reflects the importance of the disease at the time of publication. In Sir Wilfred Sheldon’s “Diseases of Infancy and Childhood” published in 1951, the top five respiratory disorders were tuberculosis (36), suppurative lung disease (22), pneumonia (20), whooping cough and bronchitis (12) and asthma (10), where the figures in parentheses reflect the relative percentage page space of the five disorders. In 1990 in “Respiratory Illness in Children” by Phelan, Landau and Olinsky the top five were acute respiratory infection (30), asthma (27), cystic fibrosis (19), congenital abnormalities (16) and tuberculosis (8). By the time textbooks are published they are already out of date because of the rapidly changing clinical picture, but what is clear over the past half century is that paediatric respiratory disease has remained common and is a significant burden in childhood for families and for the health economy. In the UK, approximately 25% of all paediatric outpatient attendances, 30% of paediatric inpatient events and 35% of paediatric primary care consultations are because of significant respiratory morbidity. Much adult respiratory disease has its origins in childhood (or even at conception in diseases with strong genetic influences). Sixty percent of asthma in adults today originates in early childhood, and it is interesting to speculate what the broad respiratory picture will look like in children in 20 years’ time.

With regard to acute respiratory infections, it is highly probably that viruses will remain the principal culprits and, in the winter months, acute viral bronchiolitis will continue to dominate our hospital wards and be the cause of recurrent cough and wheeze. Respiratory syncytial viral (RSV) bronchiolitis is characterised by Th2 cytokine release and, through the upregulation of neutrophil growth factor, causes persisting increased vascular permeability and airway hyperresponsiveness. Despite understanding the underlying mechanisms of the acute infection and the subsequent respiratory symptoms, prevention and treatment remain elusive. The monoclonal antibody palivizumab has become the preventative treatment of choice in a very small number of high-risk infants, but its high cost and the local variability in the virulence of RSV has led to much debate about when to use it. Despite much research, the complex immunopathology of RSV has prevented the development of a safe and effective vaccine, although current studies are evaluating subunit vaccines and medicines which can block its replication.

Treatment for severe acute viral bronchiolitis has advanced little over the last 30 years, and there is no medicine on the horizon that is likely to be of significant benefit other than additional oxygen for hypoxaemia.

It seems that the rhinovirus (RV) is more likely to induce allergic sensitisation than RSV, but strategies to prevent RV infections are not close at hand. Although the prevalence of childhood asthma in the UK is now lower than previously, recurrent wheeze and allergic asthma in childhood will continue to be major health issues. It seems most unlikely that any new pharmacological agents will become available in the next 20 years, so improvement in management needs to be directed at environmental issues which influence wheezing and better delivery of care in the community, targeting those individuals who need it most. At present the “inverse care law” applies in that, despite guidelines, care pathways, effective medication and improved understanding of the pathophysiology of the disease, control of asthma symptoms remains poor with patients failing to get access to the level of care they need.
The modern way of developing clinical guidelines

Bernard G Higgins

Challenges for the next 25 years

The Society can congratulate itself on many things as it celebrates its 25th anniversary, but unquestionably one of the ways in which it has made an impact is as a producer of clinical guidelines. Guidelines are the most frequently visited section of our own website, and the BTS/SIGN asthma guideline has had more hits than any other on the SIGN site.

Some clinicians do not like guidelines, feeling that they are somehow restrictive or that they promote medical laziness. Some feel that they do not need them. What most people would probably agree is that, if we are going to have guidelines, they should be good ones. The criteria for best practice in guideline production have changed considerably since the Society’s earliest work, and at our current milestone it is appropriate to look forward and consider how our high standards should be maintained. There is insufficient space here for a technically complete presentation on guideline methodology (and I doubt that most readers would want that), so I will simply highlight a few key issues.

TOPIC SELECTION

Keeping guidelines up to date while maintaining high quality is a major task, and any organisation like the BTS with an interest in this area needs to decide how to prioritise and to work on topics which will provide maximum benefit to patients. Guidelines can serve useful secondary purposes, such as demonstrating gaps in clinical evidence and encouraging research to address these, but primarily they should address a defined clinical need.
The future for lung disease in children

Warren Lenney

Thorax 2007 62: 1021-1022
doi: 10.1136/thx.2007.090969

Updated information and services can be found at:
http://thorax.bmj.com/content/62/12/1021

These include:

References
This article cites 11 articles, 5 of which you can access for free at:
http://thorax.bmj.com/content/62/12/1021#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/