rickets appeared curable by both cod liver oil and exposure to sunlight. The link between vitamin D and sunlight exposure remained elusive until two years later when Steenbock and Black were able to demonstrate that ultraviolet irradiation of vitamin D containing food increased its activity.

With scientific evidence and support, governments justified the commencement of a public health initiative fortifying common foodstuff with vitamin D, resulting in the near eradication of rickets in the USA and Canada. In the UK, mandatory fortification was legislated in 1940 when cases of rickets rose due to widespread malnutrition. Worsening air quality as a result of industrialisation was proposed to be a significant contributor to rickets by limiting exposure to UVB radiation. The introduction of the 1956 Clean Air Act, alongside fortification, is believed to have thus contributed to a reduction in the incidence of rickets. A series of deaths from idiopathic infantile hypercalcaemia in the years following raised concerns of an 'epidemic of hypercalcaemia' and led to a ban in fortification in 1953, with the exception of margarine, cereals and infant formula milk.

Conclusions Today, Public Health England (PHE) advises that children over the age of 5 years require an average of 10 μg of vitamin D a day and should consider daily supplements during autumn and winter. However, with a new rise in the prevalence and incidence of nutritional rickets recently highlighted in the UK, over the last two decades, it brings into question whether we are doing enough to implement the current policy or the policy needs adapting. Future changes may require increasing awareness of the recommendation as well as a broader fortification strategy. Regardless of the approach, paediatricians are likely to play a vital role in reducing the incidence of this entirely preventable condition.

British Association of Perinatal Medicine and Neonatal Society

1154 THE IMPACT OF LESS INVASIVE SURFACTANT ADMINISTRATION ON THE NEED FOR MECHANICAL VENTILATION IN PRETERM INFANTS <31 WEEKS GESTATION

Kimberley Jefferies, John Radcliffe Hospital, Oxford

10.1136/archdischild-2021-rcpch.436

Background Neonatal respiratory distress syndrome due to surfactant deficiency affects two thirds of preterm infants <33 weeks gestation and is associated with high morbidity and mortality. Traditional methods of surfactant administration, involve intubation and ventilation, which risks mechanical lung damage and the development of bronchopulmonary dysplasia. To reduce this risk, less invasive surfactant administration (LISA) methods have been developed, which utilise non-invasive ventilatory techniques.

The current indications for LISA on our unit include, infants ≥26 weeks gestation (<26 weeks at consultant discretion), with an FiO2 requirement >0.3 but <0.6, who have regular spontaneous respiratory effort after receiving caffeine and who are on minimal inotropic support.

Objectives To establish how many inborn infants <31 weeks gestation received non-invasive ventilation, with or without LISA and avoided the need for intubation and mechanical ventilation within the first 72 hours of life.

Methods All infants born 22+0-30+6 who received survival focused care and were admitted to NICU between 1st January 2019–31st March 2020 were included. Data was obtained using the badgernet system and included gestational age (GA), gender, birth weight, mode(s) of respiratory support within the first 72 hours and, where applicable, method of surfactant administration.

Results 131 inborn infants were identified with gestational ages ranging from 22+1-30+5. All infants <24+0 (n=10), were intubated and received surfactant within the first two hours of life.

At 24+0-24+6 (n=9), 66.7% were intubated and received surfactant within 72 hours, 11.1% received LISA and 22.2% remained on non-invasive respiratory support.

At 25+0-25+6 (n=7), 71.4% were intubated and received surfactant within 72 hours, one of whom had initially received LISA. 28.6% remained on high flow therapy (HFT).

At 26+0-26+6 (n=33), 30.3% were intubated and received surfactant as their first line therapy, 39.4% received LISA and 30.3% remained on HFT. LISA prevented intubation in 46% of its recipients.

At 27+0-27+6 (n=22), 50% were intubated and received surfactant within the first 72 hours, whilst the remaining 50% were successfully managed with LISA (13.6%) or HFT alone (36.4%).

At 28+0-28+6 (n=19), 42.1% were intubated and received surfactant as their first line therapy, 31.6% received LISA and 26.3% remained on HFT. LISA prevented intubation in 66.7% of its recipients.

At 29+0-29+6 (n=14), 14.3% were intubated and received surfactant, 50% received LISA (85.7% of whom avoided intubation) and 35.7% remained on HFT alone.

At 30+0-30+6 (n=17), 29.4% received LISA (preventing intubation in 80% of recipients) and the remaining 70.6% were managed on HFT.

Conclusions The need to intubate and mechanically ventilate preterm infants can be effectively reduced by using LISA methods, provided recipients are carefully selected and the intervention is tailored to the infants individual requirements. Implementing LISA in the delivery suite may further reduce the need for intubation in more mature preterm infants. Further exploration of swaddling and alternative analgesia is also important to minimise failure rates associated with the current procedural sedation.

British Association of General Paediatrics

1155 INTRODUCING DEXMEDETOMIDINE SEDATION TO A DISTRICT GENERAL HOSPITAL

Thomas Jackson, Deborah Daws, Darren Martin, Cassie Gymatso. North Middlesex Hospital

10.1136/archdischild-2021-rcpch.437

Background Sedation may be needed to avoid motion artefact in children undergoing MRI scans. It is preferable to a general