

Subject: RE: Neonatal air embolism
Date: Thursday, 30 June 2016 at 09:42:06 British Summer Time
From: Gibbs John (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST)
To: JAYARAM, Ravi (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST), BREAREY, Stephen (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST), **Doctor V** (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST), HOLT, Susie (ALDER HEY CHILDREN'S NHS FOUNDATION TRUST), **Doctor ZA** (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST), SALADI, Murthy (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST), Murphy Anne (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST), Powell Eirian Lloyd (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST)

Thanks Ravi.

Interestingly, this article describes some cases as occurring in clusters although, clearly, the cause of the air embolus was thought to be due to air entering the circulation from severe pulmonary tissue damage as a result of very high pressure ventilation (these cases occurred before the widespread use of surfactant and antenatal steroids). This mechanism of air emboli does not seem to apply to our run of neonatal collapses/deaths but one could speculate on other mechanisms that might produce an air embolus.

As you infer, the sudden deterioration and skin colour changes sound uncomfortably familiar to some of our cases. However, this article states that a CXR is diagnostic of an air embolus. I don't think all of our sudden collapses/deaths over the past year or so would have undergone a CXR after the collapse (some did not survive the initial resuscitation), but many ought to have had a CXR, especially those who survived the initial resuscitation (some of whom went on to require further resuscitations prior to death). One would have thought that we, or the radiologists who report our Xrays, would have spoiled signs of an air embolus on these CXRs (even though none of us would have been expecting this finding at the time). Is there any value in reviewing all the CXRs taken during or soon after the initial collapse in relevant neonates over the past year or so?

JOHN

From: Jayaram Ravi (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST)
Sent: 30 June 2016 08:25
To: Gibbs John (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST); Brearey Stephen (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST); **Doctor V** (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST); Holt Susie (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST); **Doctor ZA** (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST); Saladi Murthy (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST); Murphy Anne (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST); Powell Eirian Lloyd (COUNTESS OF CHESTER HOSPITAL NHS FOUNDATION TRUST)
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Old article but read the description of the clinical findings

http://adc.bmj.com/content/64/4_Spec_No/507.full.pdf