Rationalised limitation of labour inductions reverses a rising trend of caesarean section rate

T. Mesens1, MD, C. Van Holsbeke2, MD PhD, C. Kerkhofs1, MD, C. De Bruyn1, MD, W. Gyselaers1,2, MD PhD

1 Department of Obstetrics & Gynecology, Ziekenhuis Oost Limburg, Genk, Belgium
2 Hasselt University, Diepenbeek Belgium

Introduction & Aim

Because of a rising trend of caesarean section (CS) rate in Ziekenhuis Oost Limburg (ZOL) in Genk Belgium, an audit was performed in 2007 using the Robson classification in 10 groups (Table 1). After this, labour induction in term cephalic singleton pregnancies was identified as the most important responsible factor of the rise in CS rate. In 2008, a rationalised change of labour management was introduced by concentrating on the correct diagnosis of labour and reducing non-medical inductions in term singleton pregnancies without a scar.

This study aims to evaluate the impact on CS rate of rationalised change of labour ward management.

Study population & Methods

A prospective Robson analysis was conducted on all deliveries in ZOL between 2008 and 2012, with special interest in CS after induction (CS-I) and repeat CS (CS-R). Correlation between relative change of overall CS rate (CS-O) and CS-I was calculated using Pearson’s correlation coefficient (PCC). The evolutions of CS-O, CS-I and CS-R were plotted graphically. Neonatal outcome was assessed by comparing overall and group-specific rates of 5 minute Apgar score < 7 between 2006-07 and 2009-10. X2-test was used for comparison.

Results

A strong reduction of CS-O was observed from 25% in 2007 to 19% in 2009 (P<0.001) (Figure 1). This was associated with a reduction of CS-I from 5.3% to 2.3% (Figure 2). PCC between relative change of CS-O and CS-I was 0.65. From 2008 onward, there was a continuing rise of CS-R, until a maximum of 7.0% in 2011 (Figure 2). Neonatal outcome was not different between study periods before and after management change: overall rate of 5 min Apgar < 7 was 0.79% (33/4158) in 2006-07 and 0.90% (39/4344) in 2009-10 (P = 0.304).

Discussion

A change in labour ward management towards reduction of induced labours has led to a fast reduction of overall CS rate, related to a halving of CS after induction. This effect was counteracted by a continuing rise of repeat CS rate during at least 4 years after management change. This reduction of CS-rate was not associated with changes of neonatal outcome, as reflected in 5 min Apgar score.

A rationalised limitation of labour inductions in term singleton cephalic pregnancies can be responsible for a swift reversal of a rising trend CS without hampering neonatal outcome, but is followed by a continuing rise of repeat CS for several years afterwards.