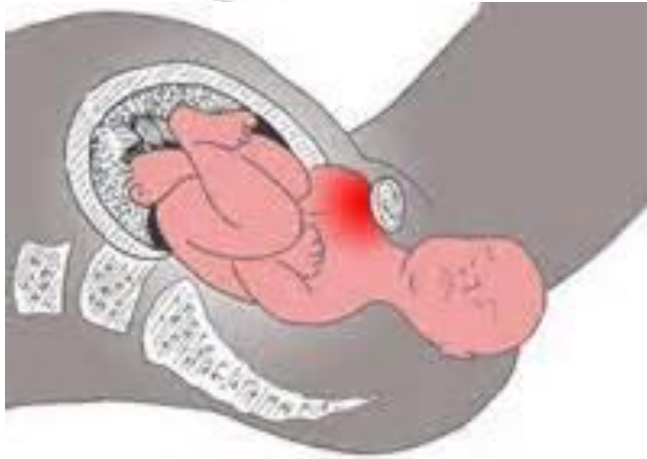


Reduction in the Rate and Adverse outcomes of Shoulder dystocia after implementation of multiple improvement measures

*KO Kou, SP Chan, BYT Lau, Teresa Ma, KY Leung
Department of O&G, QEH*



- Delayed delivery → **Hypoxic Ischemic Encephalopathy** or even **death**
- Forceful delivery → **brachial plexus injury**

- ◆ Important obstetric emergency, occurrence unpredictable
- ◆ Prevented by prenatal detection of big baby and Caesarean delivery
- ◆ Limitations in accurate prediction of big baby and shoulder dystocia can occur in average size baby



Methods

- Root cause analysis by reviewing cases of shoulder dystocia
- Identification of related risk factors
- Discussion among medical and nursing colleagues
- Implementation of several preventive and emergency measures since Feb 2012





Strategies:



✓ Detection of big baby:

- Routine measurement of symphyseal fundal height (SFH)
- Alert senior medical staff if SFH > 40cm
- USG if suspected big baby ($\geq 4\text{kg}$)
- **Caesarean section** if big baby (esp with GDM)

✓ Prevention of big baby

- Gestational diabetes (GDM) is high risk for big baby and shoulder dystocia
- **MFM team led GDM clinic** to achieve better glycemic control
- Close collaboration with **DM physicians**
- Introduction of **home blood glucose monitoring** by patient
- Screen for excessive fetal growth by **3rd trimester ultrasound scans**

✓ Prompt management of shoulder dystocia

- **Regular drills and workshops** in the Multidisciplinary Simulation and Skill Training Center and labor ward
- A **graphical representation** on the manoeuvres is posted in each labour room

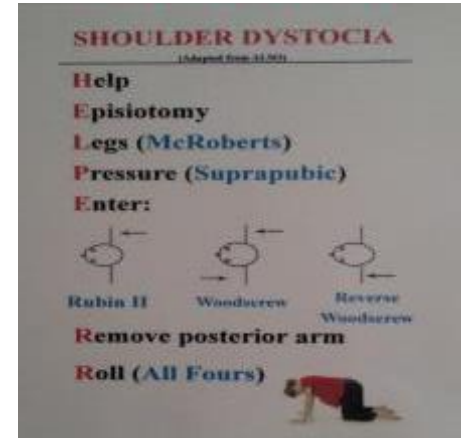
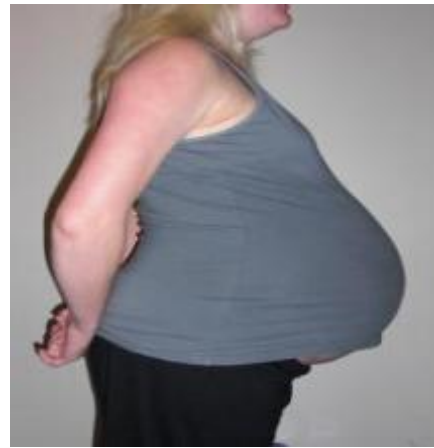
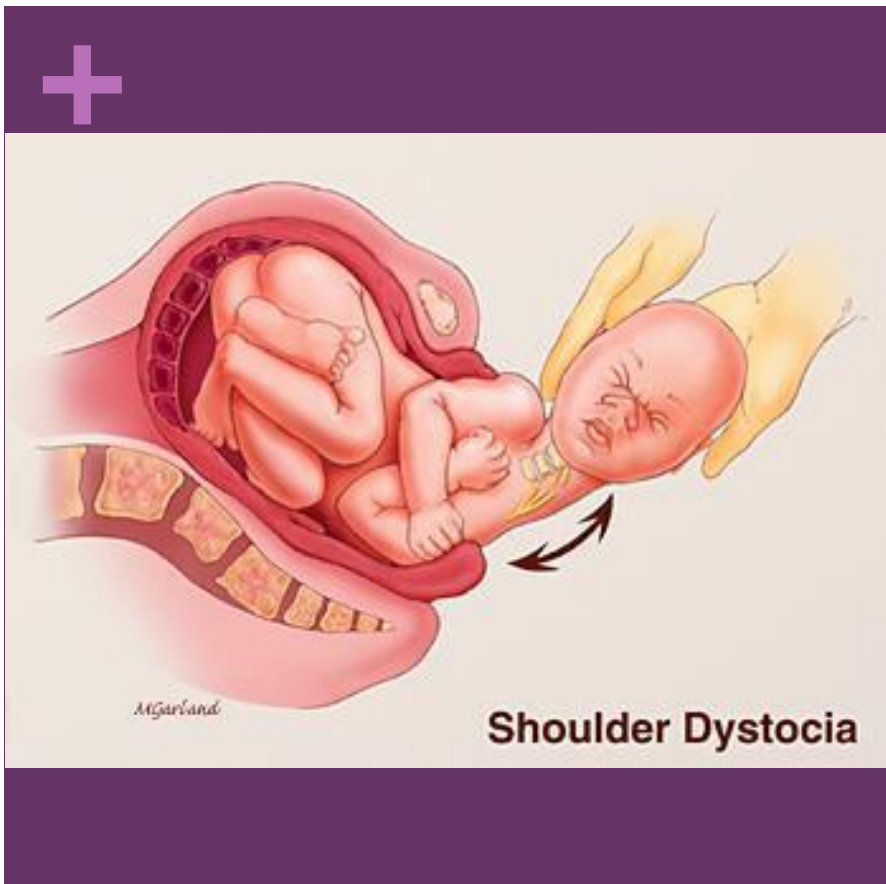


Results

	Pre-measures 20 months	Post-measures 20 months
Vaginal deliveries	10750	9795
Shoulder dystocia rate	0.18%	0.15%
% of big baby in shoulder dystocia	35.7%	18.2%
Low Apgar score	14.3%	9.1%
Hypoxic ischemic encephalopathy	2	0
Brachial plexus injury	3	2
C/S rate in BW >4kg	36.8%	34.3%

No increase in C/S rate in big baby >4kg

-> Highly selective for C/S, accurate assessment
identifying the at risk cases



Conclusions:

Improvement in outcomes were probably related to **early detection of big baby, better control in GDM, adequate training of colleagues in managing this obstetric emergency**