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INTRAPARTAL HUMERUS FRACTURE IN SEVERE REFRACTORY TRANSVERSE SHOULDER DYSTOCIA

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Dear Editor, transverse shoulder dystocia (SD) is a rare complication since high SD with anterior shoulder impaction upon symphysis accounts for more than 80% of cases. A non-diabetic secundipara had a history of SD three years before, which was successfully managed by Barnum maneuver and a healthy neonate of 4500 g birth weight, 54 cm birth length and Apgar score 10/10 was born. Now, the woman presented in 39th week of gestation with spontaneous labor stage one, regular labor pains, normal cardiotocography finding, 8 cm cervical dilatation, and infant's head engaged in the pelvis. The newborn's body mass was estimated to be around 4500 g. Upon delivery of the head without episiotomy, SD occurred, verified as transverse, deep SD that prevented external head rotation, thus McRoberts and Resnik maneuvers failed to produce desirable effect. Therefore, Woods and Menticoglou maneuvers were applied; rotating the shoulders with axilla impaction, the incarcerated right arm was released, however, with upper arm cracking. A macrosomic male newborn, 4480 g/53 cm, Apgar score 10/10 was delivered. Neurovascular status of the arm was normal. Infantogram indicated fracture of the humerus diaphysis without dislocation *(Fig. 1)*, therefore Dessault immobilization bandage was placed for three weeks, followed by temporary bandage combined with exercises. The infant was followed-up by a pediatric surgeon, the bone healed normally, without orthopedic or neurovascular sequels, with normal growth and development.

Shoulder dystocia is an obstetric event associated with considerable perinatal morbidity and mortality. Severe SD requiring multiple maneuvers has been demonstrated to correlate with poor perinatal outcome. Fractures of the humerus and clavicle are reported in 4%–40% of severe SD cases, as well as bilateral humerus and clavicle fractures [1]; a case of cervical artery dissection with ischemic insult due to severe SD has also been recently described [2]. Humerus fracture may quite frequently be associated with brachial paresis due to strong traction in 2.5% and litigation in 0.2% of SD cases [3]. Other authors report on 10.2% and 0.32% of humerus and clavicle fractures associated with SD, respectively [4], and 4.2% of humerus fracture [5]. However, fetal non-diabetic and diabetic macrosomia, as well as difficult obstetric maneuvers are risk factors for severe SD and humerus fractures, which have excellent therapeutic prognosis without residual deficits, in particular if there is no concomitant neurovascular injury, including brachial paresis.

Figures 1. Right humerus diaphysis fracture without disclocations

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