Bochdaleck diaphragmatic hernia: A case report of investigating importance of prenatal screening and vitamin A deficiency as risk factor

Octaviani J1, Purwosunu Y2

1Resident, 2Fetomaternal Consultant in Fetomaternal Division, Department of Obstetrics and Gynecology Faculty of Medicine University of Indonesia, Dr. Cipto Mangunkusumo Hospital, Jakarta, Indonesia

Introduction

Congenital diaphragmatic hernia (CDH) occurs in 1 in 2000 to 3000 newborns and is associated with a variable degree of pulmonary hypoplasia (PH) and persistent pulmonary hypertension (PPH). CDH is classified according to the location of the protrusion, including in hiatal hernia, Morgagni-Larrey hernia, and Bochdaleck hernia as results of inadequate obliteration of the lumbar elements in the pleuropertitoneal area, during the eighth and tenth week of intrauterine development.

Case Report

A full-term primigravida whose fetus was diagnosed with diaphragmatic hernia was underwent C-section due to PROM, low pelvic score, and oligohydramnios (AFI 1). A 3200 gr baby boy was born with AS 1/3/4, then was directly intubated by the perinatologist as early neonatal resuscitation for congenital diaphragmatic hernia neonates. The baby’s breathing was supported to HFO between 10 minutes. Later, the baby did not survive the early 2 days due to breathing failure in stabilization and preparation for diaphragm correction. On mother’s blood test (post delivery status), there was subclinical vitamin A deficiency as the serum Vitamin A level was 12 µg/dl.

Conclusion

Vitamin A deficiency could be act as pathogenesis of CDH. However this statement still need further study. Despite the high morbidity and mortality of newborn with CDH, prenatal screening could be a gold key to successful referral system to tertiary hospital that could handle the newborn with CHD.