

中文題目：雙胞胎孕婦併完全性房室傳導阻滯 – 個案報告及文獻回顧

英文題目：Complete Atrioventricular Block in Twin Pregnancy- A Case Report and Literature Review

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Introduction:

Atrioventricular (AV) block is defined as a delay or interruption in the transmission of an impulse from the atria to the ventricles due to an anatomical or functional impairment in the conduction system. The clinical presentation of complete AV block is variable depending upon the rate of the underlying escape rhythm and the presence of comorbid conditions. Complete AV block in pregnant women is rare, and can pose significant challenges for obstetricians, anesthesiologists and cardiologists in the antepartum, peripartum and postpartum periods. There have been a few reports of women with complete AV block in pregnancy and labor. Although some authors suggest pacemaker placement in symptomatic patients, it is still controversial in asymptomatic pregnant women. We report our experience in managing a twin pregnant woman with complete AV block who had an uneventful pregnancy and caesarian section without pacemaker implantation.

Case Report:

A 40-year-old female, gravid 1 with twin pregnancy and gestational age of 7 weeks, was referred to our Cardiology clinic for assessment of her slow heart rate after a successful in vitro fertilization. Tracing back her past history, she suffered from iron deficiency anemia and infertility for 7 years, and was diagnosed to have complete atrioventricular(AV) block at the age of 25 years. There was no further management for her complete AV block at that time since she was asymptomatic. She remained asymptomatic even after pregnancy, and denied having exercise intolerance, dyspnea, syncopal or presyncopal episode. At presentation, her blood pressure was 119/67mmHg with a regular pulse rate of 59 beats per minute. A grade II systolic ejection murmur was heard at left upper sternal border. Twelve-lead ECG revealed complete AV block with a narrow QRS complex junctional escape rhythm. No evidence of significant structural heart disease was seen on transthoracic echocardiogram. Holter monitoring showed persistent complete AV block with a

ventricular rate of 35-93 beats per minute. Her heart block was considered to be congenital after detailed negative history and investigation. Risks and benefits of various management options were discussed including temporary or permanent cardiac pacing therapy. After shared-decision making discussion, the patient was closely followed up for both maternal symptoms/ signs and fetal growth at cardiology and antenatal clinic.

Since her pregnancy course was smooth without symptoms except mild ankle edema, and the fetal growth parameters were as expected, no cardiac pacing was performed throughout the course. She underwent an elective cesarian section under epidural anesthesia at 36 completed weeks in view of twin pregnancy with breech presentation and complete heart block. She tolerate the surgery well and delivered two girl babies of 2630 gram and 2250 gram, both with Apgar score of 9 at 1 minute and 10 at 5 minutes. The patient was hemodynamically stable throughout the intraoperative and postoperative period. She remained asymptomatic and was discharged in good condition.

Discussion:

Complete AV block in pregnancy is not a common encounter but could pose potentially serious problems in pregnancy and child labor, especially in patients with significant underlying heart disease. In the 1950s, it was suggested that pregnant women with complete AV block but without pacemaker implantation was associated with high maternal and fetal death. For symptomatic patients, even in the first and second trimester, permanent pacemaker implantation is the therapy of choice. In symptomatic patients who presented at or near term, temporary pacing followed by induction of labor has been suggested.

Our patient presented as congenital AV block with twin pregnancy without permanent pacemaker. She had no structural heart disease and was asymptomatic. Her heart rate was able to rise up to 93 beats per minute at daily activity. Previous review on case reports of 13 cases who presented with complete AV block at the beginning of pregnancy, only 2 of them required implantation of a permanent pacemaker during pregnancy. Hidaka N et al reported in their case series of 22 cases presented without a permanent pacemaker at the start of pregnancy, all of them could be managed without pacing throughout their pregnancies. The role of routine prophylactic temporary cardiac pacing during intrapartum period was also questioned. They reported in

their 7 women who had temporary pacing lead inserted before induction of labor, none of them required pacing during labor. They concluded that most women with complete AV block, who do not require a permanent pacemaker before delivery, can be safely managed during labor without temporary pacing. Our case experience added another supporting evidence on this.