

## 제2형 당뇨병의 위험인자와 임신성당뇨병의 상관관계

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**목적:** 본 연구자들은 단일 기관 연구를 통해서 제2형 당뇨병의 위험인자와 임신성당뇨병 및 태아합병증의 상관관계를 살펴보는 연구를 시행하였다. **대상 및 방법:** 본 연구에서는 2015년부터 2017년까지 부산지역 대학병원을 방문한 34명의 임신성당뇨병 환자의 자료를 후향적으로 분석하였다. **결과:** 임신성당뇨병 환자의 평균 연령은 32.8세였으며 내원 당시 평균 체질량지수는 29.2로 비만한 편이었다. 27명(79.4%)이 조기분만 하였으며, 3명(8.8%)에서 태아기형이 관찰되었다. 또한 5명(14.7%)의 신생아에서 호흡곤란증후군(RDS)과 큰몸증(macrosomia)등 태아합병증이 확인되었다. 제2형 당뇨병의 위험인자는 내원당시 당화혈색소와 유의한 상관관계를 보였으며, 100g 경구포도당내성검사(OGTT)에서 식후 1시간 혈당값은 5분 아프가점수(APGAR score)와 음의 상관관계를 보였다. **결론:** 제2형 당뇨병의 위험인자를 가진 임신부는 임신성당뇨병의 위험성이 높으며 임신부의 혈당이 높을수록 신생아의 아프가점수에 나쁜 영향을 끼쳤다.

Table 1. Maternal baseline characteristics of gestational diabetes mellitus (GDM)

Characteristics (N=34)	
Age (years)	32.85 ± 4.61
Previous pregnancies	0.68 ± 0.91
Weight at Initial visit (kg)	75.51 ± 13.90
Gestational age at Initial visit (weeks)	26.1 ± 0.48
BMI at Initial visit (kg/m <sup>2</sup> )	29.20 ± 4.96
Systolic blood pressure (mmHg)	126.03 ± 19.69
Diastolic blood pressure (mmHg)	78.59 ± 14.87
Number of risk factors for T2DM	1.56 ± 0.89
Previous gestational diabetes mellitus	2 (5.8)
Alcohol drinking	none
Current smoker	none
Fasting glucose at diagnosis (mg/dL)	124.90 ± 57.55
HbA1c at diagnosis (%)	5.36 ± 0.73
Total cholesterol (mg/dL)	232.09 ± 52.17
AST	25.06 ± 13.59
ALT	20.41 ± 14.09
TSH	1.29 ± 0.85
Glucose level after 50g OGTT (mg/dL)	152.52 ± 58.67
Glucose level in 100g OGTT (mg/dL)	
Fasting	94.78 ± 12.17
1 hour	194.53 ± 30.25
2 hour	183.94 ± 35.23
3 hour	159.33 ± 32.65

Data are shown as means ± SD or number (percent). Risk factors of T2DM: family history of diabetes, obesity (BMI > 25 kg/m<sup>2</sup>) previously identified with prediabetes, hypertension, dyslipidemia (HDL < 35 mg/dL, TG > 250 mg/dL), history of cardiovascular disease, steroid treatment, alcohol drinking, current smoking

Table 2. Delivery and neonatal outcomes of gestational diabetes mellitus

Characteristics (N=34)	
Gestational age at delivery (weeks)	33.93 ± 3.47
Preterm delivery (< 37 weeks)	27 (79.4)
Labor type	
Spontaneous	5
Induction	13
No labor (elective cesarean)	16
Delivery mode	
Vaginal	18
Cesarean	16
FDIU	none
Male gender baby	24 (70.6)
Fetal anomaly	3 (8.8)
Neonatal weight (kg)	2.33 ± 0.78
1' APGAR score	7.48 ± 1.55
5' APGAR score	8.96 ± 0.98
Macrosomia (> 4kg)	2 (5.9)
Shoulder dystocia	none
Neonatal hypoglycemia (< 35mg/dL)	none
Fetal RDS	3 (8.82)
NICU admission	none
Adverse outcome	5 (14.7)

Data are shown as means ± SD or number (percent). FDIU, fetal death in utero; RDS, respiratory distress syndrome; NICU, neonatal intensive care unit. adverse outcomes is a composite of shoulder dystocia, neonatal macrosomia, hypoglycemia, RDS, and admission to the NICU.

## A case of Ectopic ACTH syndrome in a patient with metastatic prostate cancer

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**Introduction:** Ectopic adrenocorticotrophic hormone (ACTH) syndrome has been mostly associated with neuroendocrine tumors and small cell carcinoma of the lung. Ectopic ACTH syndrome of prostate cancer is rare and has been reported in only a few cases. We report a case of ectopic ACTH syndrome in a patient with metastatic prostate cancer. **Case report:** A 72-year-old man with prostate cancer undergoing antiandrogen therapy was admitted due to altered consciousness and severe hypokalemia (1.8 mEq/L). The patient showed a moon face, generalized edema and both leg weakness. Abdominal computed tomography revealed a severe bilateral hyperplasia of adrenal gland and we underwent an adrenocortical function test, which revealed markedly increased levels of basal plasma ACTH(338.7 pg/mL) and serum cortisol(40.8 mcg/dL). There was no evidence of microadenoma in sella MRI image. Under suspicion of ectopic ACTH syndrome due to prostate cancer, chest CT and PET-CT were performed and revealed a hypermetabolic signal in right lower paratracheal lymph node and sigmoid colon. We could not perform a biopsy for sigmoid colon due to severe patient's general conditions. Bronchoscopic-guided aspiration was performed on the right lower paratracheal lymph node, which showed metastatic prostate cancer, but negative findings on ACTH staining. An octreotide scan was performed to detect ectopic ACTH secretion, but it was negative finding. We administered ketoconazole and aldosterone to treat symptomatic and uncontrolled hypokalemia for ectopic ACTH syndrome. However, the patient died of a septic shock associated with pneumonia due to the rapid deterioration of the ectopic ACTH syndrome on 3 months after admission. **Conclusion:** Ectopic ACTH syndrome associated with metastatic prostate cancer is rare, but characterized by rapid progression and poor prognosis. Ectopic ACTH syndrome should be suspected if there is abnormality in electrolyte and adrenal gland in patients with metastatic prostate cancer.

