

The Case

A 38-year-old woman presented with a symptomatic left ovarian complex cyst and 6-week intrauterine pregnancy. The patient underwent an uncomplicated, elective laparoscopic left ovarian cystectomy, suction curettage for termination of pregnancy and insertion of Implanon NXT®. Histopathology confirmed products of conception and a left ovarian teratoma. She was normotensive pre-operatively (BP 100/70mmHg), had no regular medications or past medical/surgical history.

Day 1 post procedure



BP 89/49
Symptomatic hypotension
Abdominal pain



Electrocardiogram, chest x-ray (CXR), computed tomography (CT) chest, abdomen and pelvis and CT pulmonary angiogram no abnormalities



Intravenous fluid therapy (IVT), ferric carboxymaltose 1g infusion. Discharge BP 103/60mmHg

Day 14 post procedure



BP 73/37
Symptomatic hypotension
Unconscious collapses
Occipital headaches



CT brain-venogram, transvaginal/transabdominal ultrasound, CXR, echocardiogram no abnormalities



Paracetamol 1g oral and IVT. Discharge BP 103/55mmHg

Day 21 post procedure



BP 51/44
Symptomatic hypotension
Confusion
Difficulty speaking



Magnetic resonance imaging brain with time-of-flight angiogram no abnormalities



Removal of Implanon NXT®
Symptom resolution within twelve hours, BP 110/65mmHg.
Asymptomatic five-weeks later, BP 100/60mmHg

Symptomatic hypotensive episodes following Implanon NXT® insertion: a case report

The Discussion

Implanon NXT® contains approximately 450 pg/mL etonogestrel with a half-life of 25 hours, thus approximately 25% of circulating etonogestrel would have been renally excreted twelve hours post removal, a substantial concentration which could reasonably explain the patient's resolution of symptoms [4, 5].

There have been several studies investigating the effects of progesterone on mean arterial pressure. They have demonstrated that progesterone influences BP directly through vasoactivity and indirectly by inhibiting vasoconstriction through L-type calcium channel modulation and increased renin-aldosterone-system activity [30]. Thus, it is possible that exposure to exogenous progestogens, like etonogestrel, may similarly cause hypotension in someone with increased vascular sensitivity.

The absence of literature on Implanon NXT® and episodic hypotension highlights the need for further studies, strengthening the role of disseminating cases such as this to assist clinicians in identifying hypotension as a rare adverse drug reaction, thus facilitating timely management.

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“Implanon NXT® is a long-acting reversible contraceptive implant with high efficacy and minimal maintenance [1]. This case report describes an adverse drug reaction following Implanon NXT® insertion of recurrent symptomatic hypotensive episodes with resolution after removal.”



References