



## Severe Catamenial Asthma Necessitating Hysterectomy and Salpingoophorectomy

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### Abstract

A very rare case of severe catamenial asthma with multiple intensive care admissions who was not responding to hormonal therapy is discussed. This case significantly improved with hysterectomy and bilateral salpingoophorectomy confirming the catamenial pattern of this debilitating illness.

**Keywords:** Asthma; Catamenial; Hysterectomy; Salpingoophorectomy

### Introduction

"Exacerbation of certain medical conditions at specific menstrual cycle phases is a well-recognized phenomenon" [1]. Most of these menstrual alterations to disease pattern occur during the luteal and menstrual phases of the cycle. Reported examples are migraine, urticaria, asthma, irritable bowel syndrome, diabetes and epilepsy [1].

To explain this deterioration with menstruation, several theories have been proposed including hormonal fluctuations of sex steroids and hyper sensitivity to progesterone, oestrogen and prostaglandins [1].

Catamenial asthma is characterized by recurrent episodes of serious, possibly fatal, asthma attacks occurring at the time of menstruation with a reported decrease in peak expiratory flow rates [1-3]. This can be associated with increasing asthma complications such as respiratory failure [3]. It is rare and under diagnosed in the medical literature. We report a severe case of catamenial asthma where failure of medical treatment including ovarian down regulation lead to surgical clearance. Patient consent was obtained [1,4].

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### Case Report

A 47 year old lady, mother of four, works as a community nursery nurse with a past history of asthma since the age of 23 is reported. She was an ex-smoker of 10 years duration. Her asthma control deteriorated over the past year despite being on six medications (Table 1). These severe exacerbations coincided with her menstruation necessitating hospital admissions (10 times in a year ranging between 3 and 14 days) with three high dependency unit admissions. She was referred to the regional complex asthma clinic where a catamenial pattern to her asthma was highlighted and any underlying immunological condition was ruled out. These episodes were described as debilitating and affecting activities of daily living due to severe dyspnea with mild exertion. Due to the catamenial pattern of her attacks, a gynecology opinion was sought, and she was started on desogestrel (cerazette, 75 microgram, Merck Sharp & Dohme Ltd, New Jersey, US), which was discontinued after 6 months due to lack of improvement. She was then commenced on Goserelin (Zoladex, 3.6 mg monthly injections, AstraZeneca, Macclesfield, UK) which improved respiratory symptoms for the first four cycles and the response declined after wards. After further consultations, a decision was made for a more invasive approach with a total hysterectomy with bilateral salpingoophorectomy. The procedure was uncomplicated with a smooth post-operative period.

Initial review in the outpatient respiratory clinic showed a significant improvement in respiratory parameters (Table 1). Catamenial asthma was confirmed as the patient stopped most asthma medications (Table 1). She did not have any severe asthma attacks since more than two years post-surgery and was discharged back to her general practitioner.

### Conclusion

Surgical clearance is considered the final resort for severe debilitating cases of Catamenial

**Table 1:** Comparison between respiratory function and medication used before and after surgery.

	Before surgery	After surgery
<b>FEV1</b>	1.68 (59%)	2.23 (79%)
<b>FVC</b>	2.26	3.11
<b>PEF</b>	330	410
<b>Asthma Medications used</b>	<b>Beclometasone</b> with formoterol (Fostair NEXThaler 100/6, 2 puffs twice/day, Maintenance & Reliever Therapy, Chiesi Ltd, Manchester, UK), <b>Tiotropium Bromide</b> (Spiriva Respimat spray, 2.5 mcg, 2 puffs/day, Pfizer US), <b>Uniphyllin MR</b> (200 mg, twice/day, Napp Pharmaceuticals Ltd, Cambridge, UK), <b>Prednisolone</b> (20 mg/day, Schering & Upjohn, US), <b>Montelukast</b> (Singulair 10 mg/night, MSD Merck CO, UK), <b>Salbutamol</b> (Ventolin, 100 mcg, upon need, GlaxoSmithKline, Middlesex, UK).	<b>Fostair</b> 100/6 2 puffs twice/day, <b>Salbutamol</b> inhaler upon need

FEV1: Forced Expiratory Volume; FVC: Forced Vital Capacity; PEF: Peak Expiratory Flow

asthma not responding to medical treatment with good outcome. To our knowledge this is the first case of severe Catamenial Asthma successfully treated with surgery.

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