

Asthma and Pregnancy: Pharmacological Management



Scaramozzino Marco Umberto^{1*}, Fabiana Furci², Corrado Pelaia³, Guido Levi⁴, Veronica Nassisi⁵ and Giovanni Sapone^{6,3}

¹Director of the "La Madonna" Clinic in memory of Dr. A. Scaramozzino in Reggio Calabria, Head of the Thoracic Endoscopy Service at Tirrenia Hospital, Belvedere Marittimo (CS), Italy

²MD, PhD Specialist in Allergology and Clinical Immunology - Provincial Health Agency of Vibo Valentia, President of the SIAAIC Regional Section of Calabria

³Department of Medical and Surgical Sciences University "Magna Graecia" of Catanzaro Catanzaro, Italy

⁴Pulmonology Department, ASST Spedali Civili, Brescia, Italy, Department of Clinical and Experimental Sciences, University of Brescia, Italy

⁵General Medicine Unit, San Camillo Clinic, Viale Principe Umberto 71, 98122, Messina

⁶Cardiology Department, Head of Nursing Polyclinic M.d.c., Reggio Calabria, Italy

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***Corresponding author:** Dr. Marco Umberto Scaramozzino, Director of the "La Madonna" Clinic in memory of Dr. A. Scaramozzino in Reggio Calabria, ViaSan Giorgio Extra 95, 89100 Reggio Calabria, Italy

Abstract

Pregnancy is a significant phase in a woman's life characterized by numerous physiological changes to accommodate the developing fetus. When coexisting with respiratory conditions like asthma, special attention is required throughout the nine months. Asthma, a prevalent condition among pregnant women, necessitates close monitoring and symptom management to ensure a safe pregnancy outcome. While some women experience stable asthma symptoms during pregnancy, others may witness changes, either exacerbations or improvements. Poorly controlled asthma, especially severe forms, poses risks to both maternal and fetal health, including preterm birth, low birth weight, and increased perinatal mortality. Therefore, maintaining asthma therapy prescribed by specialists is crucial during pregnancy to mitigate associated risks. Corticosteroid inhalers remain the first-line therapy, deemed safe for both mother and fetus, while long-acting inhaled antimuscarinics can be considered if corticosteroids alone are insufficient. A multidisciplinary approach involving primary care physicians, obstetricians, and pulmonologists/allergists is recommended to tailor treatment strategies, ensuring optimal symptom control and prevention of asthma exacerbations. Awareness of the significance of asthma management during pregnancy, adhering to individualized treatment plans, remains pivotal for navigating this unique period safely.

Keywords: Monitor asthma; Pharmacological therapy; Asthma pathology; Pulmonology; Allergology; Asthma exacerbations; Cardiac contraction; Peripheral vascular resistance; Diaphragm; Perinatal mortality; Aerosolized corticosteroids; Inhaled antimuscarinic

Letter to the Editor

Pregnancy is undeniably one of the most significant moments in a woman's life, during which her body undergoes numerous and diverse changes to adapt to the new condition and transform into the space to welcome and safeguard the new life forming within. Furthermore, when living with a respiratory condition such as asthma, it is crucial to consider this peculiar condition when facing the 9 months of pregnancy. Asthma is indeed one of the most common conditions that pregnant women must contend with [1]. Additionally, with the increasing number of women facing pregnancy at an older age than in the past, there has been an observed rise in the prevalence of asthma within this category

of expectant mothers. During pregnancy, it is essential to closely monitor asthma and its characteristic symptoms since controlling asthma and avoiding asthmatic crises and exacerbations, while maintaining proper adherence to therapy, promotes the management of pregnancy and its conclusion without further complications. Throughout the 9 months of pregnancy, one-third of asthmatic women may not experience changes in the condition and its related symptoms, while the remaining two-thirds may witness either worsening or improvement of asthmatic symptoms compared to the preceding period [2]. Particularly when dealing with patients with severe forms of asthma,

suboptimal symptom control could jeopardize the mother and fetus, risking complications during and before childbirth. Hence, it is fundamental to maintain pharmacological therapy prescribed by specialists during gestation to avert issues related to asthma pathology. Presently, scientific evidence exists regarding the effectiveness and safety of maintenance therapies used for asthma during pregnancy, along with various other evidence concerning the potential side effects of medications used during pregnancy itself. Therefore, it is highly important during pregnancy to engage with one's primary care physician, obstetrician, and designated specialist in pulmonology and allergology to establish clear objectives for symptom control and pathology management. A multidisciplinary approach is advisable, whereby the health status of the mother and fetal development are evaluated and duly considered, focusing on controlling and preventing asthma exacerbations.

We now know conclusively that during pregnancy, numerous physiological changes occur in women, including [3]:

a) increased cardiac contraction with reduced peripheral vascular resistance, leading to an increase in red blood cells and plasma in the blood,

b) Additionally, induction of increased respiratory rate, linked to hormonal mechanisms with a sensation of physiological "air hunger," elevation of the diaphragm resulting in reduced lung volumes,

c) Increased levels of pro-inflammatory proteins in the blood, leading to high cellular stress due to hormonal variations.

Hence, the risk of uncontrolled asthma during pregnancy can jeopardize its successful outcome, potentially resulting in [4]:

- Premature birth,
- Reduced birth weight,
- Increased perinatal mortality.

Currently, data are available on all classes of drugs used in asthma during pregnancy, and from the scientific evidence in the literature, it is evident that the first-line therapy remains inhaled or ; only in specific exacerbation cases. It proves to be the safest therapy for both mother and fetus and should never be discontinued during pregnancy. Alongside this, the long-acting inhaled antimuscarinic is also considered safe, to be used in second place if there is no benefit from corticosteroid use [5].

Conclusion

In conclusion, the awareness of the importance of treatment during pregnancy, maintaining the therapy that the woman practiced before pregnancy or adjusting it to the pregnant woman's needs, remains to date an essential strength for managing the condition during this particularly unique period.

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