Global Journal of Anesthesiology

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Dates: Received: 12 October, 2015; **Accepted:** 15 October, 2015; **Published:** 15 October, 2015

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Editorial

Structural Differences in Respiratory System and Airway of Parturients

Editorial

Oxygen consumption increases with increased alveolar ventilation and respiratory alkalosis occurs. Thus, PaCO2 becomes 28-32 mmHg in pregnant women, and this amount is compensated with renal bicarbonate absorption. Preoxygenation can be made slower by inhalation of 100% oxygen for 2-5 minutes. Denitrogenation of the lungs occurs after three minutes [1]. Another method can be applied quickly with 4-8 deep breaths of 100% oxygen [2]. However, for pregnant women who will have a cesarean section under general anesthesia, an oxygen fraction of 1 has been shown to increase fetal oxygenation more compared with the 0.3 or 0.5 FiO2 [3]. As this may lead to free oxygen radicals and apsorbtion atalectesia, 80 % oxygen is recommended.

Increased mucus secretion may lead to nasal obstruction and result in epistaxis [4]. While minute ventilation increases, residual volume, expiratory reserve volume, functional residual capacity and the compliance of chest wall decreases. Besides total lung capacity may be protected via an increase in vital capacity. In pregnancy, forced vital capacity and forced expiratory volume in 1 second remain stable through the physiologic pulmonary changes.

Airway edema and capillary engorgement in pregnant women increase the risk of mucous membrane bleeding. The edema and weight gain also results in an increased Mallampati score and an eight times increased risk of difficult intubation. Breast enlargement also contributes to difficulty during intubation. Once a parturient with difficult airway anatomy is identified, a plan should be formulated including an apropriate communication skill [5].

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