

Lung diseases in pregnancy

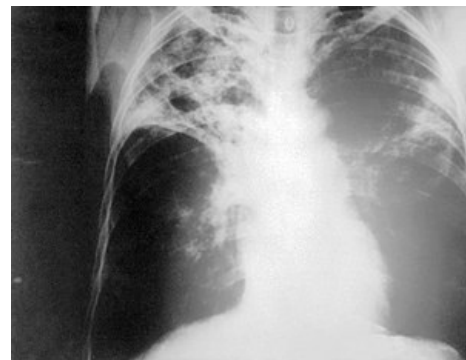
Some **major changes in respiratory system** occur during pregnancy. In the first half of the pregnancy only the minute volume increases, in the second half both the residual volume (RV) and expiratory reserve volume (ERV) are decreased, as well as $p\text{CO}_2$ in alveoli and arterial blood. Increased values include respiratory volume, minute volume and venous blood oxygen saturation. The values of arterial $p\text{O}_2$ and vital capacity (VC) do not change, they tend to decrease just before giving birth. This article discusses the matter of tuberculosis, sarcoidosis, bronchial asthma and pneumonia in pregnancy.

Tuberculosis

A gynecologist encounters tuberculosis in women within areas with a high incidence of tuberculosis. In women at risk of contact is a **tuberculin test** indicated, which is also of great importance in pregnancy. When tested positive, an X-ray examination of the chest usually follows with a sample of **sputum** (exclusion of acid-resistant rods). If an acute form of tuberculosis is suspected, women undergo antituberculosis therapy in order to prevent congenital tuberculosis and avoid postpartum vertical transmission from the infected mother to the newborn.

Therapy

- Isoniazid and rifampicin (possibly also etambutol);
- pyridoxin is co-administered;
- streptomycin is strictly contraindicated due to possibility of hearing impairment in newborns;
- the newborn has to be vaccinated (BCG vaccine);
- if the mother had not received antiTBC treatment, the newborn should be isolated until negative tuberculin test result



Tuberculosis-x-ray

 For more information see *Tuberculosis (pneumology)*.

Sarcoidosis

Sarcoidosis is a granulomatous disease that affects lungs, lymph nodes, heart, CNS, skin, eyes and liver. The disease usually **does not affect** the pregnancy and is treated with glucocorticoids.

Bronchial asthma

is an issue in about **1 % of all pregnant women**, in about 30 % the disease gets better with pregnancy, in 20 % worsens and in 50 % has no effect on the pregnancy whatsoever. Appropriate treatment and monitoring with continued usage of bronchodilators or corticosteroids is crucial. It is recommended to increase the dosage of glucocorticoids and to use epidural anesthesia during childbirth.

 For more information see *Asthma*.

Pneumonia

Pneumonia can be caused by **bacteria** (mostly likely *Streptococcus pneumoniae*) or by **viruses**. Bacterial pneumonia is treated with penicilins or cephalosporins. When unsuccessful, possibility of mycoplasma pneumoniae infection should be considered and treated with erythromycin (for 10–14 days). **Viral pneumonias** could induce varicella or flu, with **very severe course** in pregnancy. We use acyclovir for treatment.

 For more information see *Pneumonia*.

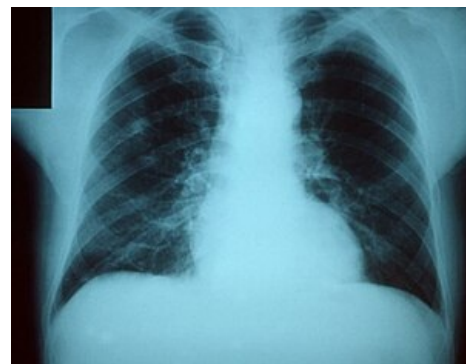
Links

Related articles

- Lung volumes

References

- ČECH, Evžen, et al. *Porodnictví*. 2. edition. Praha : Grada, 2006. ISBN 80-247-1303-9.



pneumonia X-ray

- Quadruplets of elaborated questions according to study materials from J. Beneše, L. Mikšíka, elearning and book gynekologie a porodnictví / Martius 2005 /.