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RESEARCH ARTICLE

RUPTURED PULMONARY HYDATID CYST PRESENTING AS PLEURAL EFFUSION IN A THIRD TRIMESTER PREGNANT WOMAN

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Abstract

Background: Hydatid disease is a zoonotic disease caused by infection with Echinococcus granulosus .Pulmonary hydatid cyst often becomes symptomatic after cyst rupture in the pleural cavity or bronchus.Pulmonary hydatid cyst may be misdiagnosed and therefore patients may receive inappropriate treatment.In this case, a 27-year-old full term pregnant female presented with sudden onset dyspnea and hypoxia. Upon further evaluation, it was found to be a ruptured hydatid.

Case Report: A 27 year old full term(36 weeks) pregnant patient was admitted with sudden onset of dyspnea,fever and hypoxia(SpO2-84% (RA)).Patient was evaluated and obstetric parameters were found to be within normal limits. Chest X-Ray revealed a right homogenous opacity with CP angle blunting.Diagnostic thoracocentesis showed an exudative effusion which was pale in colour.Immunoglobin-G enzyme-linked immunosorbent assay for Echinococcus was positive.HRCT Thorax showed a right sided ruptured hydatid cyst.ICDT insertion was done,fluid drained and Abendazole was started.Patient showed progressive improvement and had a normal vaginal delivery. A seven months follow up found the patient to be healthy and free of symptoms.

Discussion: Pulmonary hydatid cyst most commonly appears in the lower lobe of the right lung, and is usually solitary. These cysts may initially be asymptomatic.Pulmonary hydatid cysts rupture in about a third of patients,leads to secondary hydatid spread, asphyxia, anaphylactic shock, acute respiratory failure, massive hemoptysis, and circulatory collapse.Ruptured pulmonary hydatid cyst may be misdiagnosed as pneumonia, tuberculosis, lung abscess, tumor, or pneumothorax.

Conclusion: Hydatid cyst rupture should be suspected in patients from areas where Echinococcus is endemic.In symptomatic cases surgical excision with Tab.Albendazole for minimum 3 to 6 months duration is the main stay of treatment.

Introduction:-

Hydatid cyst (hydatidosis) is a zoonotic disease caused by Echinococcosis granulosus and multicularis.Most common organs to be involved are the liver (60%) and lungs (20-30%). The right lung and the lower lobes are more

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commonly affected [1] .Clinical presentation may include chronic cough, chest pain, shortness of breath, and hemoptysis. Rupture of pulmonary hydatid cysts can lead to acute onset shortness of breath, fever, and the expectoration of clear, salty fluid along with fragments of hydatid membrane [1] . Pulmonary hydatid cyst during pregnancy is rare and life-threatening condition for the mother and fetus..In pregnancy, hydatid cysts may enlarge due to suppressed cellular immunity and steroids from the placenta. In late pregnancy, cysts can grow significantly,increasing the risk of rupture due to uterine compression and potential anaphylactic shock [2] .

Case Report:

Patient Information/Clinical History:

A 27 year old full term(37 weeks) pregnant patient was admitted with sudden onset of dyspnea,fever and hypoxia(SpO2-84% (RA)).Patient had history of seven months dry cough that progressively worsened over the last two months, unresponsive to symptomatic medications.

Clinical Examination:

On admission, the patient was anxious and severely dyspneic. Her vital signs were as follows: temperature of 38.5°C, blood pressure of 112/68 mmHg, heart rate of 135 bpm , regular rhythm, respiratory rate of 35 breaths per minute, and oxygen saturation of 84%(RA).The patient underwent evaluation of obstetric parameters, which were found to be within normal limits.

Diagnostic Assessment:

Blood Investigations:

Her complete blood count (CBC) showed anemia(Hb-8/dl) with mild neutrophilic leukocytosis.Routine investigations,sputum C&S,Gram staining and CBNAAT found to be negative.Immunoglobin G enzyme-linked immunosorbent assay for Echinococcus was positive.

Radiology:

Bedside USG was suggestive of thickened and severely broken pleural line with a large subpleural collection and there was a suspicion of a large fluid-filled cyst in Right hemi thorax.Chest X-Ray was suggestive of right homogenous opacity with CP angle blunting.HRCT Thorax showed a right sided ruptured hydatid cyst causing pleural effusion.

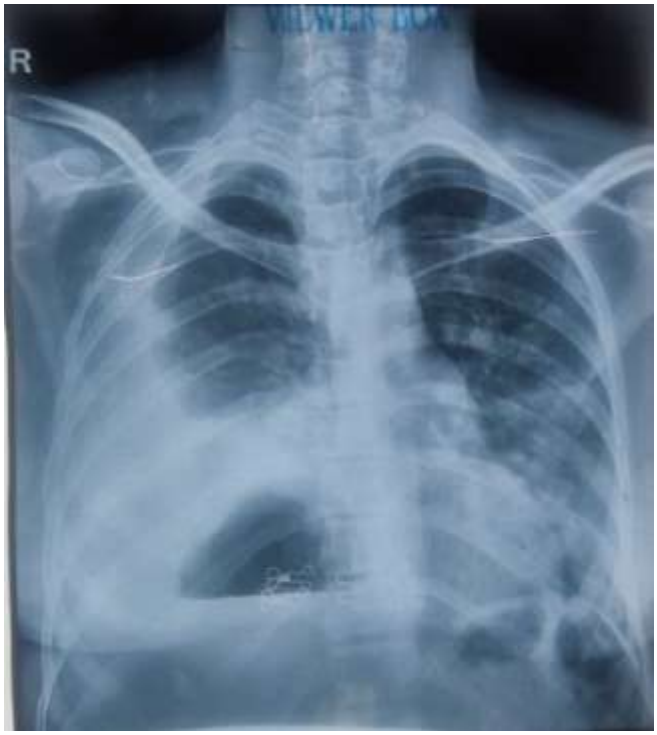

Image 1:- Right hemithorax opacity with costophrenic angle blunting.

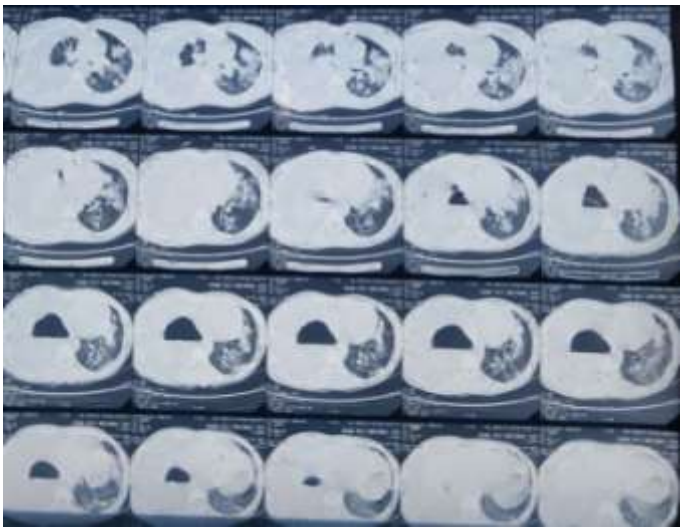

Image 2:- Right sided ruptured hydatid cyst causing pleural effusion.

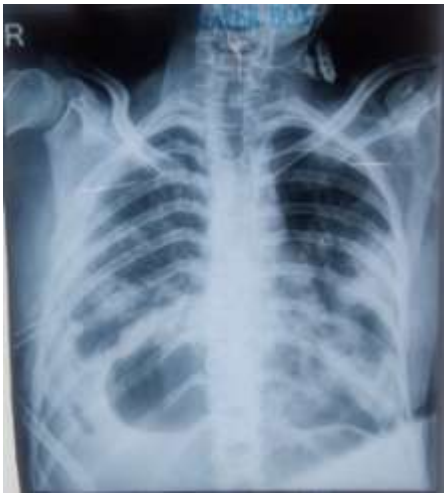

Image 3:- After intercostal drainage tube insersion.

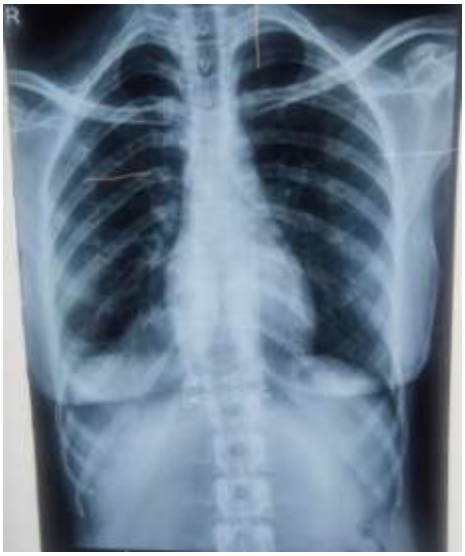

Image 5:- Chest X-ray after 7 months.

Therapeutic Interventions:
ICDT insertion was done in right side,fluid drained and Abendazole was started.Patient showed progressive improvement of symptoms.She had a normal vaginal delivery.Chest tube was removed after 8 days when drain was <50 ml/day for 3 consecutive days.

Follow-Up nd Outcome:
On Seventh month follow up visit found the patient to be healthy and free of symptoms. Chest Xray was done, found to be normal.

Discussion:-

Pulmonary hydatid cyst most commonly appears in the lower lobe of the right lung, and is usually solitary.Pulmonary hydatid cysts rupture in about a third of patients,leads to secondary hydatid spread, asphyxia, anaphylactic shock, acute respiratory failure, massive hemoptysis, and circulatory collapse [3] .

Eventhough rare hydatid cyst can occur in pregnancy and rupture can lead to respiratory failure and anaphylaxis.Ruptured pulmonary hydatid cyst may be misdiagnosed as pneumonia, tuberculosis, lung abscess, tumor or pneumothorax [2] . Hydatid cyst rupture should be suspected in patients presenting with pleural effusion who are from areas where Echinococcus is endemic [4] . In symptomatic cases surgical excision with Tab.Albendazole(15mg/kg) for minimum 3 to 6 months duration (15mg/kg)is the main stay of treatment [5] .

Patient Perspective:
Patient was extremely satisfied by the care and treatment obtained.

Informed Consent:
Informed consent was obtained from patient for publication.

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