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An Interesting Case of Pleural Effusion

KEYWORDS

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INTRODUCTION:

The reprted incidence of pleural effusion with acute pancreatitis ranges from 3-17%.In a study of pleural complications on pancreatitis radilogical abnormalities were found in 55% of 58cases.The presence of pleural effusion in patients with acute pancreatitis is an indication of severe disease.Massive pleural effusion is a well known complication of chronic pancreatitis .The radiological features of pancreato-pleural effusions &pulmonary abnormalities were first described by "HULTEN".O. in 1928.

CASE HISTORY:

A 48year old male came with complaints of breathlessness &cough with expectoration for 2months ,sputum yellow in colour not blood stained ,no h/o weight loss or abdominal pain.K/C/O of bronchial asthma

K/C/O ch.alcoholic for 15years

ON EXAMINATION:

vitals:stable,pallor+

CVS:S1S2+ , RS:decreased airentry on right side , P/A:Soft, CNS :NFND

INVESTIGATIONS:

Hb-10.3 ,TC -10,300 ,

CXR- Bilateral pleural effusion right greater than left.So patient was inserted with ICD

Non BAL,blood ,urine cultures-no growth
Viral markers negative

PLEURAL FLUID ANALYSIS:

RBC-18,100 ,WBC-150cells/cu.mm(polymorphs-65%,

lymphocytes-35%) ,protein-3,Sugar -143,LDH-390

ADA-15.5,culture-no growth,cytology negative for malignant cells.LIGHTS CRITERIA suggestive of exudative effusion .

CTTHORAX: Patchy areas of consolidation with multiple segmental plate like atelectasis involving right lung ,bilateral pleural effusion

Pleural fluid amyalse -4571 ,lipase -1049 but serum amylase &lipase were normal.

As pleural fluid amylase &lipase were high medical gastro opinion obtained advised to do MRCP .MRCP done suggestive of chronic pancreatitis ,pancreatic fluid collection,mild ascites,large left pleural effusion .

So patient was started on inj.octreotide 50mcg S/C

TREATMENT HISTORY:

INJ.TAZOMAC 4.5 gm IV TDS

AKT-4 ,INJ.LEVOFLOX 500mg ,INJ.OCTREOTIDE S/C 50mcg OD

DISCUSSION:

CAUSES OF EXUDATIVE PLEURAL EFFUSION:

1.Neoplastic diseases: metastatic disease, mesothelioma
2.Infectious diseases:tuberculosis,fungal,parasitic
3.Pulmonary embolization
4.GIT causes: esophageal perforation,pancreatitis,intraabdominal abcessess,after liver transplant
5.Collagen vascular diseases: Rheumatoid arthritis, SLE, sjogren's disease
6.Drug induced: Nitrofurantoin,dantrolene,amiodarone,bromocriptine
7.Other causes: trapped lung, radiation therapy, hemothorax, chylothorax

MEHANISMS OF PANCREATITIS CAUSING PLEURAL EFFUSION:

1.Direct contact of pancreatic amylase with the diaphragm
2.Hematogenous carriage of pancreatic enzymes of pleura
3.Direct movement of fluid from abdomen to thorax by
a)natural hiatus
b)diaphragmatic perforation by pancreatic pseudocyst
c)transfer of fluid into pleural cavity by transdiaphragmatic lymphatics

In patients with acute pancreatitis ,pleural effusion usually resolves as the pancreatic inflammation subsides.

If the pleural effusion does not resolve by 2weeks of treatment then there may be a possibility of pseudocyst

PLEURAL FLUID ANALYSIS IN PANCREATITIS:

1.Exudate with high protein& LDH
2.Serosanguinous
3.WBC 1000 to 50000cells(predominantly polymorphonuclear leukocytes)
4.High amylase level

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WHEN TO DO AMYLASE IN PLEURAL EFFUSION:
It was first described by Warner in 1942 ,this tells us the unusual nature of the effusion.

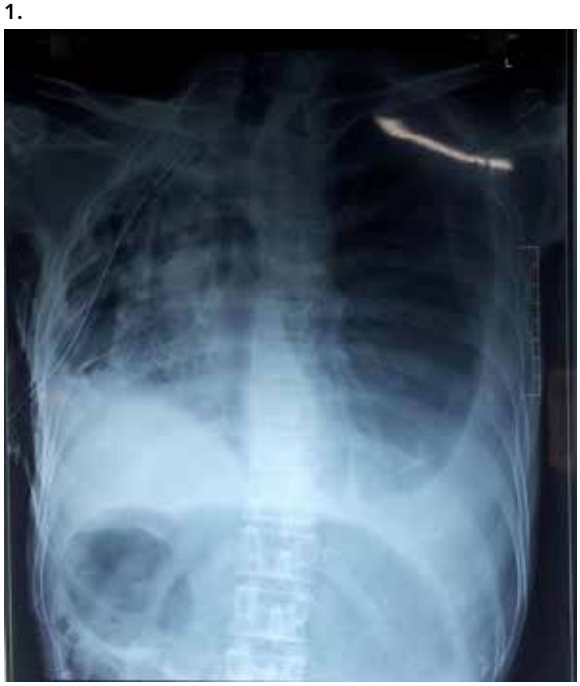
But routine measurement is not indicated ,only in certain conditions:
1.malignancy(adenocarcinoma)
2. ruptured oesophagus
3.reactive pancreatic effusion
4.pleuropancreatic fistula

PULMONARY COMPLICATIONS IN PANCREATITIS:
Occurs in 75% cases
1.hypoxia with no radiological features
2.atelectasis/pulmonary oedema
3.ARDS
One rare complication is development of bronchopleural fistula,in this there will be expectoration of copious amount of yellow fluid.

TREATMENT:
1.Conservative (50%success)
NPO or TPN or slow advancement of diet
Octreotide 100mcg sc TID (THIS HAS INHIBITORY EFFECT ON PANCREATIC EXOCRINE ACTION)
2.ERCP
Stenting of pancreatic duct may allow antegrade drainage
3.Surgical
distal pancreatectomy ,pancreatojejunostomy.

CONCLUSION:
1.The presence of pleural effusion in patients with acute pancreatitis is an indication of severe disease.
2.The pleural effusion in pancreatitis are small & asymptomatic sometimes & are usually left sided.
3.In contrasrt large ,often blood stained pleural effusion may develop weeks,months,years later after an episode of pancreatitis.

1.



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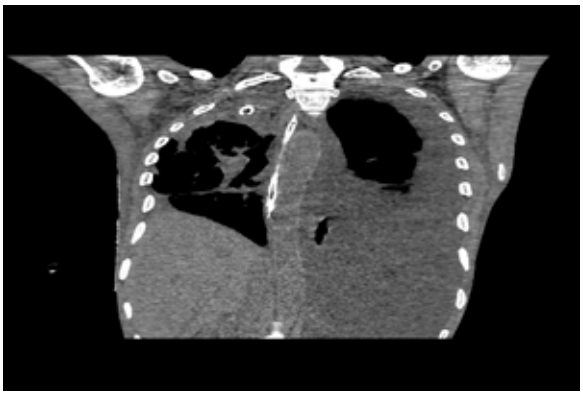

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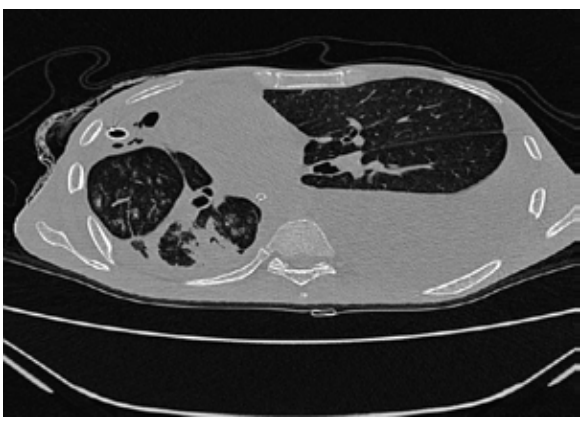

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