HRCT in acute lung disease
(Clinical Manifestations CT Findings and Differential Diagnosis of Acute Interstitial Pneumonitis)

Dr. Yannick Cartier, M.D., F.R.C.P.C

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Objectives

At the end of the session the participant will:

- Have a much better understanding of the most common acute lung diseases and their CT findings.
- Be able to distinguish, when possible, the CT findings of DAD or AIP from other acute lung diseases.
Objectives

At the end of the session the participant will:

- Have a much better understanding of other less common acute idiopathic interstitial pneumonitis
- Have a much better understanding of the most common causes of infectious interstitial pneumonitis and their differential diagnosis
What is the most likely diagnosis?

A: Pulmonary edema
B: Just a bad classical pneumonia
C: Atypical presentation of a typical Hanta virus pneumonia
D: Goodpasture
E: Acute DIP
What is the most likely diagnosis?

A: Pulmonary edema

B: Just a bad classical pneumonia

C: Atypical presentation of a typical Hanta virus pneumonia

D: Goodpasture

E: Acute DIP
Essential anatomy: The Secondary pulmonary lobule
The Secondary pulmonary lobule
Pulmonary edema
Pulmonary Edema
Ddx: LC
Pulmonary Edema
Case # 2
What is the most likely diagnosis?

A: Pulmonary edema again! ;o(

B: Just a bad classical pneumonia

C: Atypical pneumonia

D: NSIP

E: Organizing DAD
What is the most likely diagnosis?

A: Pulmonary edema again! :o(

B: Just a bad classical pneumonia

C: Atypical pneumonia

D: NSIP

E: Organizing DAD
What is DAD?
Acute DAD
Crazy paving
Ddx
Ddx: TRALI
Organizing DAD
Organizing DAD
Organizing DAD
Organizing DAD
Organizing DAD
DAD survivor
Ddx: Acute exacerbation of chronic ILD
Acute exacerbation of chronic ILD
Case # 3
What is the most likely diagnosis?

A: Pulmonary edema
B: Just a bad classical pneumonia
C: Acute silicosis
D: Acute NSIP
E: Acute UIP
What is the most likely diagnosis?

A: Pulmonary edema

B: Just a bad classical pneumonia

C: Acute silicosis

D: Acute NSIP

E: Acute UIP
Bacterial pneumonia
Bacterial pneumonia
Ddx
Ddx
Peumocystis Jirovecii
Lung cysts
Pitfall
Viral pneumonia
Case # 4
What is the most likely diagnosis?

- A: acute UIP
- B: fluid overload
- C: viral pneumonia
- D: Acute HP
- E: VIP
What is the most likely diagnosis?

A: acute UIP
B: fluid overload
C: viral pneumonia
D: Acute HP
E: VIP
Ddx: Pulmonary hemorrhage
HP
Case # 5
What is the most likely diagnosis?

A: UIP

B: CKWRPUIILD

C: Drug induced ILD

D: Goodpasture

E: Pulmonary edema
What is the most likely diagnosis?

A: UIP

B: CKWRPUILD

C: Drug induced ILD

D: Goodpasture

E: Pulmonary edema
Drug induced ILD
Drug induced ILD
Drug induced ILD
In summary

In usual clinical practice, edema is the most likely cause of acute pulmonary disease and has recognizable CT findings.

DAD, or AIP when no cause is found, is the hallmark of ARDS patients and has slightly different CT findings than pulmonary edema from heart failure or fluid overload.
**In summary**

- Acute exacerbation of chronic ILD is often fatal, rapidly progressive, and mimics AIP or DAD in many aspects. Comparison with prior CT is often very useful.

- HP, from any cause, often has characteristic CT findings and must be recognized, if possible, since it is a potentially fatal but often treatable disease with a much better prognosis than DAD or acute exacerbation of chronic ILD.
In summary

INFECTION MUST ALWAYS BE CONSIDERED IN THE DIFFERENTIAL DIAGNOSIS OF ACUTE LUNG DISEASE AND HAS VERY VARIABLE CT FINDINGS DEPENDING ON THE OFFENDING AGENT.
In summary

There are several less common causes of acute lung disease but only a few have characteristic CT findings.

Drug induced lung disease is increasingly encountered and should ALWAYS be considered if somebody is on any medication specially chemotherapeutic agents.
Thank you!