Radiological Quiz

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Case history

A 10-year-old boy presented with left sided neck mass for 1 week. The size is progressive increasing. He has no cough, no fever or no haemoptysis. Physical examination revealed there was no pallor. There were multiple cervical lymph nodes mattered together and the maximum size was 4 cm in diameter. No dilated veins or facial swelling was noted. Chest examination was clear. Abdominal examination revealed no enlarged liver or spleen.

Here are the CXRs of the child:

Question
1) What do you see in the CXRs?
2) What is your diagnosis?
3) What are the investigations you will order to confirm the diagnosis?
   What is the precaution that you have to be aware of?

(Answer on page 17)
Myth 5: Many primary studies are required to conduct a meta-analysis.

**Reality:** Meta-analysis can be conducted using only one primary study but the results is meaningless. (No combination) Theoretically, combination of results can be done using only two studies but the added value would be minimal. The average number of primary studies included in Cochrane review is six.

Myth 6: Any values with standard error can be combined by using meta-analysis.

**Reality:** Some values such as odds ratio, rate, ratio, standardized mean difference, likelihood ratio are extensively studied for meta-analysis. However, some values such as number need to treat do not have the statistical property for being an optimal choice to combine. Risk difference (RD) as a candidate for meta-analysis is still controversial. Please consult a statistician.

Myth 7: For meta-analysis, we should use the traditional cut-off point of alpha equal to 0.05.

**Reality:** There is a very common misconception that the unit of statistical analysis in meta-analysis is the aggregated subjects in each primary studies. However, the actual unit of analysis is the effect size of each primary studies. Therefore, the sample size for a meta-analysis is usually very small, for example, if a meta-analysis only included 5 studies, the total sample for that particular meta-analysis is only 5! It is generally recommend to relax the critical value of alpha to 0.10 in order to reduce the possibility of type II error.

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**Answers to Radiological Quiz on page 15**

**Answer:**

1) Enlarged mediastinum

2) Lymphoma

3) CT scan thorax and biopsy under airway protection.
   - Anterior mediastinal syndrome is an uncommon but life-threatening paediatric oncology emergency.
   - High suspicious of superior mediastinal syndrome is needed.
   - Watch out for signs and symptoms of airway obstruction, superior vena cava syndrome in any patient presented of a large neck mass and look for any mediastinal mass.