

Case of the Month: Answer to Case 2

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Abstract

The question was:

No need for words.

Figure 2

Figure 1: Chest Xray with complete filling of the heart with air due to massive gas embolism



1. What abnormalities are demonstrated by the cardiac silhouette?
2. What is your differential diagnosis of this chest x-ray?
3. How do these chest x-ray findings relate to the Brooklyn Bridge in New York City?

The answer is:

This case represents a 45 year-old diver found washed ashore on the coast. The deceased was in complete diving

gear and no evidence of trauma was noted. An autopsy was performed and this radiograph was obtained at the start of that examination.

The chest radiograph demonstrates complete filling of the heart with air due to massive gas embolism. Blood has been forced out of all chambers of the heart by the coalescing bubbles. The differential diagnosis would include nosocomial injection of air such as with placement of a central line. The findings of this radiograph relate to the Brooklyn Bridge in New York historically. During the construction of the bridge the engineers worked on the supports under the water of the East River. In order to work at depth they entered into chambers, called caissons, which were then lowered to the river bed where construction work was performed. Unfortunately, these caissons were not pressurized. Upon returning to the surface many of the workers suffered debilitating injuries that only years later were recognized as results of decompression illness. Hence the term 'caisson's disease' is synonymous with the 'bends' or more accurately, decompression illness. In fact, explosive decompression occurred on several occasions leading to death from asphyxiation, drowning, and decompression. Such explosive decompression could have produced radiographic changes as seen in our case.

{image:2}

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References

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