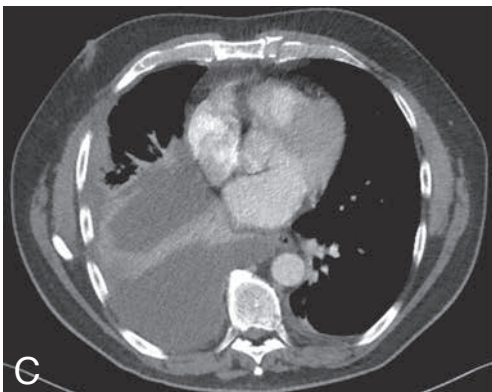
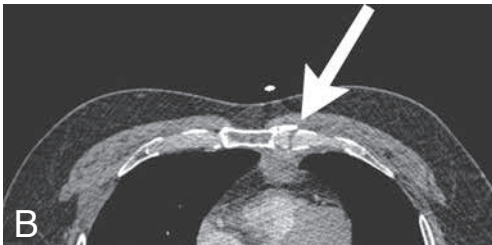
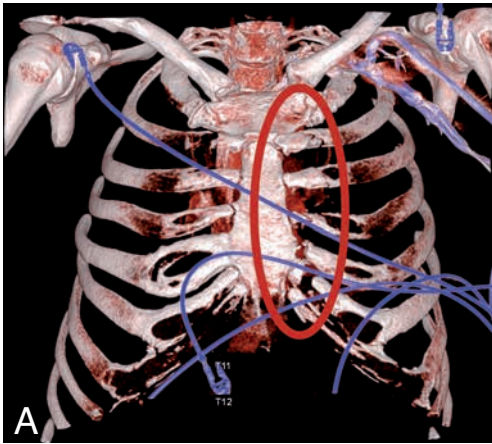


IMAGES IN CLINICAL RADIOLOGY



Combination of unusual lesions after blunt trauma

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A 59 year-old man fallen from a roof covering 3 meters high, was carried to the emergency department. A short loss of consciousness was noted with scalp wound. Patient major complaint at arrival was sternal pain. Body-CT was realised for this blunt trauma. There was no cerebral trauma except left parietal cutaneous abrasion. An uncommon association of left cartilage fractures from piece 1 to 6 (Fig. A, B) and right adrenal haemorrhage with small retroperitoneal hematoma was diagnosed (not shown). The patient was observed in the intensive care unit for 5 days and 2 days more in gastroenterology department. He came back to hospital 1,5 month later for dyspnea and left thoracic pain. Chest radiography and CT revealed a huge right pleural effusion (Fig. C) and some healing right anterior arch costal fractures revealed by callus formation. Second look to basal body-CT did not find those not displaced rib lesions. A possible post-traumatic late chylothorax was suggested. He was definitively discharged 5 days after surgical pleural treatment via thoracotomy.

Comment

Body-CT is a daily practice in emergency radiologic department. Ever increasing number of images and pressure related to urgent management make body-CT interpretation not so easy and may become in some circumstances an uncomfortable task for the radiologist. Uncommon injuries may be present or associated as in this case report. This presentation also illustrates the fact that some lesions may be missed and that delayed injuries may appear.

Costal cartilages are easily recognized at CT (1), their shapes are well-known and their density is higher compared to direct environment. Fracture classically corresponds to focal interruption of the cartilage with or without displacement. No gas was isolated in the six cartilage fractures.

Late post-traumatic chylothorax is rare. Chylothorax develops in penetrating and less often blunt trauma by damage to the thoracic duct and collection of chyle within the chest. Management combines intercostal drainage and total parenteral nutrition to reduce chyle flow. When this conservative treatment fails, surgery consists in thoracic duct revision (repair of focal wound or ligation) and pleurodesis.

Adrenal gland trauma is present on 1-2% of CT imaging for blunt trauma although the occurrence is thought to be much higher. The right adrenal gland is more commonly affected with a ratio of 3-4/1. The only way to exclude a pre-existing adrenal mass is to compare with prior or further imaging test. Isolated adrenal gland trauma is uncommon (< 5%).

Body-CT seems very sensitive and specific concerning the two acute diagnoses exemplified in this traumatic history. CT is also the key diagnostic tool to handle delayed traumatic events.

Reference

1. Malghem J., Vande Berg B.C., Lecouvet F.E., Maldague B.E.: Costal cartilage fractures as revealed on CT and sonography. *AJR*, 2001, 176: 429-432.

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