Impact of computed tomography in diagnosis of complex disease of pleural space

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Pleural diseases are often complex, difficult to diagnosis and problematic to manage. A wide variety of neoplastic, inflammatory and traumatic process may involve the pleural spaces. Also as a complication of wide variety of neoplastic and non-neoplastic process in pulmonary and extra pulmonary region.Although chest radiography is the first approach for evaluation of pleural disease, CT is an ideal method for assessment of pleural lesion because it allows cross sectional imaging thus overcoming the problem of overlapping densities on plain X-ray.A number of benign pleural processes can mimic neoplastic diseases on conventional chest radiographs. Often cross section analysis of the pleural abnormalities using CT can identify the process as a benign one such as pleural plaque, rounded atelectasis, extrapleural fat or pleural pseudotumor.Thirty patients with different pleural diseases were studied, their age range from 9-7years and males to females are lto 12 respectively. These cases are selected according to the changes of the pleural space during plain X ray chest or CT chest.All patients are subjected to full history taking' plain X-ray chest' CT chest and sometime confirm the diagnosis by CT guided biopsy or cytological examination.-133-SummaryThese patients are classified according to the diagnosis into die coilowing groups:Group IPleural effusion, 10 cases in percentage 33.3% and this group issubdivided intoFree pleural effusion, 5 cases in percentage 44.5%Encysted pleural effusion, 2 cases in percentage 22.2% HyDROPneumothorax , 2 cases in percentage 22.2% Pyopneumothorax , 1 case in percentage 11.1%Group IIPneumothorax, 2 cases in percentage 6.7%Group IIIPleural thickening and calcification, 2 cases in percentage 6.7%Group. IVPleural thickening, 1 case in percentage 3.3%Group VPleural tumors, 15 cases in percentage 50%, 2 cases of mem arcprimary neoplasm in percentage of 13.3% and 13 cases are secondary in percentage 86.7%Static's analysis of the, result is done and compared with pervious universal researchCT is particularly helpful in assessment of loculated pleural effusion.CT is helpful in distinguishing pleural from subdiaphragmatic fluid-134-SummaryCT plays a major role in diagnosis of empyema. Also CT is the best method to differentiate empyema from peripheral pulmonaryabscesses.CT can reveal a small amount of air and is recommended in critically ili or traumatized patient.Complex parenchymal pleural diseases may also be difficult to sort out with conventional radiography alone and often benefits from further analysis by CT examination such as bronchopleural fistula.CT is superior to radiography in assessment of pleural tumors and determination of pleural extension

to the lung or chest wall.CT is of proven efficiency for assessing the response of the patient for therapy.