

EXPERIENCES ON THE USE OF ULTRASONOGRAPHY IN DIAGNOSIS AND
TREATMENT OF PULMONARY AND PLEURAL DISEASES

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The results of 14 year experience on the use of ultrasono-
graphy /Amode/ in chest diseases will be presented.

Ultrasound appeared very useful in detecting and localizing
pleural effusion. In one study carried out in 116 patients with the
diseases of the pleura the pleural fluid was detected by ultrasound
in 93%, excluded in 8% of cases. The superiority of the ultrasonic
method over the radiologic one has been demonstrated, and the dif-
ference was most obvious in cases of small pleural effusion. Ultra-
sound permitted the detection of very small amounts /even 3 to 5 ml/
of loculated pleural fluid. In contrast to the radiologic method,
ultrasound permitted easy differentiation between loculated pleural
fluid and pleural thickenings. Ultrasonography appeared especially
useful in the accurate localization and precise indicating of the
site for needle aspiration of even the smallest fluid collections.
It made possible thoracocentesis in 94% of cases.

Since 1975 a specially designed ultrasonic guiding transducer
with a central canal has been used for continuous monitoring of
thoracocentesis. The use of the transducer made possible to observe
the puncture needle entering the pleural space, the position of the
needle and the thickness of the fluid layer during the whole proce-
dure of thoracocentesis. It simplified thoracocentesis and enhanced
its safety in patients with small and loculated pleural effusions.

The own experience based upon results of ultrasonic examinations
of more than 300 cases with pulmonary diseases shows that ultra-
sonography appeared to be useful in diagnosis and treatment of peri-
pheral lung lesions. Pulmonary abscess, cysts and tumors could be
easily demonstrated and precisely localized for puncture or biopsy.
Ultrasound permitted also detection of all lesions which produce
consolidation of lung tissue i.e. pneumonia, tuberculosis, lung
infarcts if the lesions were near the chest wall.