concerned. But is it safe when the ultimate issue of the case is considered? Those who favor puncture of the chest wall assert that there is great danger to the lung from delaying its expansion, danger of adhesion, of consolidation, of retraction of the chest wall, and of permanent dislocation of other organs.

These accusations are somewhat vague, and, so far as we know, are not supported by any carefully prepared statistics. Still they deserve consideration, and the well-recognized fact that attacks of pleurisy often precede the outbreak of phthisis, to which Chauvet has recently called attention in the *Lyon Mèdicale*, May 24, 1885, may indicate some imperfection in the method of treating pleurisy. This point, however, should not be strained any more than another, which is made against operative interference, that the outbreak of phthisis which sometimes follows is to be attributed to it.

The negative evidence in favor of the medicinal treatment of pleural effusion lies in the asserted danger of puncturing the pleural cavity. This is said to consist in the risks of septic infection, of converting a serous effusion into empyema, of arousing into activity a latent tendency to tuberculosis, and a certain danger of wounding the lung. The last of these dangers is hardly of much significance, the next to last probably owes its terrors to the mistake of taking *post hoc* for *propter hoc*. The danger of septic infection and of converting a serous effusion into an empyema is very real, and there have been only too many exemplifications of it. But it is an error to suppose that the danger is inevitable. With proper antiseptic precautions there is scarcely any reason why tapping the chest should subject the patient to risk of this sort. It is possible, of course, that the aspirating needle or trocar may pass through the fluid and wound the lung, so that from it a source of putrefaction or of specific disease shall gain access to the cavity of the pleura. But this is very unlikely to happen, and no virulent material ought to come from without if the operation be done correctly. That this, however, does sometimes take place only shows that those who have had such results have something to learn in regard to the principles and practice of asepsis.

It cannot be maintained that there is any considerable danger in the operation of thoracentesis when done carefully, and the choice between it and medicinal treatment must be determined by the estimate of their relative efficiency, and especially by the suitability of either to each particular case.

In some cases the most conservative medical man feels constrained to tap, in others all but extremists would hesitate to do it. Aufrecht, in the *Berliner klinische Wochenschrift*, No. 10, 1886, maintains that small effusions—which may be cured by salicylic acid—should not be tapped, but when the effusion reaches the third intercostal space in front, the fluid should be let out; and this he believes to be a good rule even when the symptoms do not seem to threaten life. But it is not well always to empty completely the pleural cavity. Aufrecht thinks that more than five pints should never be withdrawn at one sitting, and Barbe, in the paper above referred to, is of the opinion that tapping need not be resorted to until the accumulation amounts to about two quarts, and that only half of this should be drawn off at a time. His opinion is founded on an experience of fourteen cases, in which he made twenty-seven punctures, and in which there were no subsequent paroxysms of cough, or serous expectoration. In Aufrecht's experience, morphia subdued the paroxysmal cough perfectly.

Very recently Heitler, in a paper in the *Centralblatt fur die gesammte Therapie*, for June, 1886, has advocated active interference in pleural effusions. He does not believe that early puncture can abort a pleurisy, and recent French experience has demonstrated that putting such a belief into practice has led to an increased mortality. Aufrecht does not overlook the fact that desperate cases have recovered without tapping. But he regards the presence of either a very large effusion, a rapid rate of effusion, or a long persistence of the effusion as a sufficient indication for operative interference. What he means by long persistence of the effusion may be gathered from the statement that thoracentesis should be practised if the effusion remains stationary for two or three weeks, and shows no tendency to resorption. Stöhr, in an inaugural thesis, Erlangen, 1885, came to much the same conclusion. He analyzed fifteen cases of operation, and considered the proper indications to be urgent symptoms, great effusion, rapid accumulation, and considerable displacement of the viscera.

In all that has been said thus far, it has been assumed that the discussion refers to simple serous effusions. For purulent, ichorous, or hemorrhagic effusions, the propriety of tapping, drainage, and washing-out, seems to be beyond question. But even in deciding what is to be done for an effusion supposed to be purely serous, it must not be forgotten that it cannot always be certainly determined without resort to hypodermatic aspiration. Polaine, in the *Gazette des Hôpitaux*, Nos. 38 and 130, 1885, has asserted that there are no certain signs of the nature, nor of the amount of an effusion. This view may be an exaggerated one; but the possibility of error in this respect should not be overlooked.

In conclusion, we think that it may be said that medicinal treatment suffices for the relief of the great majority of cases of serous effusion in the pleural cavity, but that tapping should be resorted to when a rapid accumulation produces dangerous