TREATMENT OF TUBERCULOUS EMPYEMA WITH P.A.S.

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This is a short report on twelve cases of tuberculous empyema treated with P.A.S. in Ruchill Sanatorium between January and December 1948. This comprises all cases of tuberculous empyema admitted to Ruchill during that year. No attempt was made to treat alternate cases by aspiration alone or by aspiration and drugs. This series is uncontrolled.

TECHNIQUE

The method of treatment was to empty the empyema cavity of pus by aspiration, after preliminary screening, and then to inject P.A.S. into the space. This was done at weekly intervals, unless the pus was seen to be absent or minimal on screening. Treatment was continued until the fluid in the empyema cavity became clear or the space obliterated. When the fluid became clear, aspiration was continued but no P.A.S. was injected.

The preparation of P.A.S. used was a 20 per cent. solution sodium salt in sterile water. This was supplied in 10 ml. ampoules. One ampoule of this solution, i.e. 2 gm. of P.A.S., was injected into the empyema cavity at each treatment.

BACTERIOLOGY

The pus was examined for the presence of the tubercle bacillus by direct smear only. In four of the twelve cases the tubercle bacillus was demonstrated in the direct smear. In these four cases after treatment with P.A.S. for a variable period (one to two months) no tubercle bacilli were present on the direct smear.

TOXICITY

No toxic effects attributable to P.A.S. therapy were observed in this series. In two cases transient bloodstaining of the pleural fluid was noted, but this was considered to be due to accidental puncture of a vessel in the parietal pleura, as the blood soon disappeared and further staining did not occur during continuance of P.A.S. treatment.

RESULTS

The results of treatment briefly are as follows:—

In one case only was complete re-expansion of the lung secured with no residual fluid in the pleural cavity. This was in a young woman of 22 who developed a pyopneumothorax following adhesion.

Given to the Tuberculosis Society of Scotland as part of a symposium on P.A.S.
section in September 1947. She was treated with P.A.S. from February to March 1948. By May 1948 the affected lung had completely re-expanded and there was no residual fluid in the pleural space.

In three cases treatment has been reasonably successful in that almost complete re-expansion of the lung has been secured with only a small amount of clear fluid with no tubercle bacilli present on the direct smear. One of these three cases was a girl of 17 who developed an empyema following adhesion section in June 1947. She was treated with P.A.S. from February to July 1948.

In seven cases an empyema cavity with thick walls producing variable amounts of pus has persisted. One of these cases was a young woman of 25 who developed a pleural effusion following thoracascopy in June 1947. The fluid was aspirated, but finally went on to become an empyema. She has been treated with P.A.S. from February 1948 to date, but there is still an empyema cavity.

The remaining case had a fatal outcome. This was a girl of 14 with extensive bilateral pulmonary tuberculosis who was admitted with a spontaneous pneumothorax and a haemorrhagic purulent effusion. She received P.A.S. therapy for five weeks. She developed a sinus in the chest wall and a frank haemothorax which was treated by aspiration only. She died of an abrupt fatal haemorrhage into her pleural cavity.

In all cases it was found that weekly aspiration and injection of P.A.S. into the empyema space in a variable period of time resulted in a thinning of the pus. Whether this was due to P.A.S. or simply to aspiration is largely debatable, as many of you will be able to record cases where by simple aspiration this occurred.

It would be unwise to draw conclusions from this small uncontrolled series and I shall not attempt to do so.

(Dr Simpson illustrated his cases by showing numerous X-ray films.)