A SIMPLE TECHNIQUE FOR INTRODUCING LIPIODOL INTO THE LUNGS

BY

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Several methods have been described for the injection of lipiodol into the lungs. One of the earlier methods was by injection into the trachea through the crico-thyroid membrane. This method is not free from complications, and owing to easier means of access is gradually being abandoned.

The peroral methods may be divided into two groups:

1. The aspiration of lipiodol after cocainization of the laryngo-pharynx.
2. The peroral introduction of a catheter through the anaesthetized larynx.

The disadvantage of the first method is the inevitable partial swallowing of the oil and the difficulty of a uniform distribution of the oil throughout the bronchial tree. The second method as usually performed requires profound anaesthesia of the laryngo-pharynx and expert laryngological skill.

The method we originally adopted at the bronchoscopic clinic at the Margaret Street Hospital for Consumption was that of Dr. Garcia Vicente, which consists of a catheter introduction through the larynx by means of a special forceps for holding and directing the catheter into the larynx. The necessity for profound anaesthesia of the laryngo-pharynx, and the bulkiness of the forceps, which made it especially difficult to use in nervous and young patients, was the reason for our originating this quite simple technique.

Reasoning that the natural way to the larynx is through the nose, we tried introducing the catheter along the floor of the nose, and were astonished at the ease and simplicity with which the catheter entered the larynx. The procedure is so simple that no previous experience is necessary.

PROCEDURE

The equipment required is: one gum elastic catheter, No. 6 or 7, a 40 c.cm. syringe, and a spray containing a 4 per cent. solution of cocaine.

The patient is seated and the neck slightly extended. One nostril, the oro-pharynx, and the larynx are slightly sprayed with the cocaine solution. The sterilized catheter is gently passed along the floor of the nose until it reaches the posterior pharyngeal wall, when, with a slightly increased pressure, it passes without any difficulty directly into the larynx, because the deglutition reflex has been inhibited by cocainizing the oro-pharynx.

The presence of the catheter in the trachea is proved by listening to the inspired and expired air passing through. Two c.cm. of the cocaine solution are immediately introduced through the catheter. The patient is now ready for the introduction of the oil. The entire procedure should not take longer than three minutes.

The patient is placed on the *x*-ray table, which is tilted into the Trendelenburg position. The injection of the oil is begun. In this position the oil readily flows into the upper lobe bronchi. To ensure an equal distribution in both lobes, the patient is directed to turn first on to the right side and then on to the left. The oil flow is watched on the *x*-ray screen. When indicated a radiogram is taken. This should be done as soon as the bronchial tree appears filled, and before the oil has spread into the alveoli. The table is now put into the horizontal position and the injection of the oil is continued. As

before, the patient is directed to turn first on to the right side and then on to the left side. In all, about 40 c.cm. of lipiodol are introduced. The filling of the lower lobes is again observed on the *x*-ray screen, and a radiogram is taken when the whole bronchial tree is clearly visualized.

Thirty cases have been done with this technique, and in no case has the result been obtained other than with extreme ease and satisfaction.

Memoranda MEDICAL, SURGICAL, OBSTETRICAL

AN UNUSUAL COMPLICATION OF BLOOD TRANSFUSION

The transmission of an acute infective fever from one person to another by transfused blood must be a very rare event. That it can occur is clearly demonstrated by the following case:

The patient was a man, aged 36, who had suffered from pernicious anaemia for many years. He had experienced several previous transfusions of blood, with no subsequent reaction beyond slight pyrexia.

On this occasion he was given 520 c.cm. of defibrinated blood from a private donor at 6 p.m. on February 16th, 1931. The donor and recipient both belonged to Group II (Moss); the donor did not enter the patient's room. The operation was completed without difficulty; the temperature rose during the night to 100.8° F., but no other evidence of reaction was observed.

He remained perfectly well until 4 p.m. on February 18th, when a slight rigor occurred and the temperature rose to 104.2°. Headache was severe; alarming pains came in paroxysms in the back and limbs, at times with such sudden intensity that the patient shrieked in his agony. Extreme tenderness was manifested over musculo-tendinous structures, aponeuroses, and the fibrous parts of large joints, but there was no joint swelling. The tongue was coated, the throat dry and a little red and sore. Salicylates and S.U.P. 36 brought considerable relief. During the night a burning painful cough developed, of the tracheal and high bronchial type.

It appeared to be an attack of severe influenza, which slowly subsided in about ten days, leaving a state of extreme prostration and a very troublesome tracheal cough. No gastro-intestinal features appeared at any time. It was not until three weeks after the transfusion that there occurred to the writer the possibility of infection from the donor. On communicating with him it was found that he had had influenza and was still too ill to leave his house. It appeared that he had been "not quite himself" on the day of the transfusion. Twenty-four hours later, on the following evening, he had been completely overcome by a severe attack of influenza similar to that experienced by the recipient. The pains in the limbs had been less intense, no gastro-intestinal symptoms had appeared, and the attack had slowly passed off in about ten days, leaving him very weak, with a dry cough that was "tearing his chest to pieces."

COMMENT

There can be no doubt that the donor's blood contained active infective matter. The course and features of the attack in each case were almost identical. The greater intensity of the recipient's limb pains may be explained partly or entirely by the fact that he was already suffering from pernicious anaemia, a disease in which bone pains and neuralgia are not uncommon.

The donor's attack preceded the recipient's by twenty-two hours, a point of considerable interest; but it would be unwise to draw important conclusions from it without more precise knowledge of the nature of the infective matter and its titre.

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